CRASH

MICRO GAMES ACTION

No 6 July 1984 75p

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Cover by Oliver Frey

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MICRO GAMES ACTION

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Atic Attack – The Map

The response to our draw an Atic Atac map competition has proved to be enormous. As I write this, **Timothy Stamper of Ultimate** tells me that the prize is being cast. The trophy of the ACG Key stands twelve inches high. It won't be long now before the winner's name emerges.

Meanwhile, from the wealth of detail sent in already, our colour poster is being prepared. Part One may be found in the centre of this month's issue, with Part Two to follow next month. All you have to do is carefully lift up the staples and pull the two centre pages out. Part One contains the **Attic, First Floor** and **Ground Floor**. Part Two has the **Basement** and the **Caverns**. The two parts assemble longways one above the other to make up a finished poster approximately 297mm wide by 840mm high.

There must still be people around who will find the map useful as a guide to playing *Atic Atac*, but for those who already know the place inside out, we hope the poster will make an interesting decoration and provide a memory of hours spent undoing what Ultimate has wrought!

Since the item on the Golden Key of ACG was written, the superb trophy has arrived – and it stands 14 inches high on its base. Watch out for the next issue, where the winner will be announced! In the meantime, plans are afoot for a follow-up competition from Ultimate based on Sabre Wulf. Watch out for details – next issue.

Big is Beautiful

I was interested in the reaction of a caller who, in passing, commented that CRASH so often concentrated its reviews on smaller, often unknown, software houses. There was the implication in the tone of his voice that this was something of a failing – rather as though we were unable to get games to review from the bigger, more important companies. Or perhaps it was a reference to the lack of good games in summer. Whichever, it has to be said that CRASH set out to be a comprehensive review magazine (that can be difficult at times, but we do our best) and as such is duty bound to review games from any sized software company when and as space allows.

Besides which, even the biggest software houses today were all little ones a year or two back. Who is to say that some genius operating from his or her back bedroom today won't be a giant come Christmas? It's the ideas that count. What is a problem for the young and unknown software house is exposure – letting people know that they're there. Almost every magazine in the business will devote space instantly to *Jet Set Willy* and *Sabre Wulf*, but who apart from the specialist mags will bother with *Dennis Through the Drinking Glass* or Application's follow-up *The Tebbit*? I know that the majority of readers are only interested in the 'biggies', but it can lead to missing out on a lot of very good and entertaining games. In CRASH we try to redress the balance a bit.

On top of that it would be a good question to ask – do the 'biggles' always come up with the goods?

Summer Slump

Running on from the above piece, small and large software houses alike are now facing the traditional summer slump. It may seem odd to talk of a tradition in a market barely in its third year, but experience indicates that the summer is always poor for software sales. Not unnaturally, games players who would have to be dragged away from their Spectrums in the dark winter months find that there are more interesting things to do outdoors during the summer. Consequently, less software is bought and loaded.

Last summer, less wary, the software houses carried on advertising in the magazines and were then upset when they found that the sales figures didn't equal the advertising bills. This year, everyone is acting more cautiously, looking over their shoulders at the circulating rumours that so and so is about to go under. Naturally, the slump hits the smaller companies with less funding much harder, but one or two of the real 'biggies' don't seem to find it easy to pay for their advertising bills either.

The records do show that sales of games drop in the summer, but perhaps the software houses are helping to perpetuate a vicious circle by hibernating. This is considered a poor time to release new games. I write this on the eve of seeing Ultimate's new game, *Sabre Wulf*. It might be salutory to remember that *Sabre Wulf* is only Ultimate's seventh game, being released in the summer, and that their first two, *Jetpac* and *Pssst*, were launched about a year ago – right in the middle of everyone else's slump. As a result of their experiences across the year, they are probably quite unconcerned about releasing a major game (with a new price too) in the middle of summer. It highlights a fallacy in the theory that a good product should be saved up until Christmas – with a lack of good games to buy and play, any really good game released will stand out – and be bought. But if there is a tendency to pull in the horns during the summer and not release good games, then the buyers are going to bother even less, thus tightening the vicious circle.

CRASH Hotline

The Hotline is hotting up! Calls coming in now are virtually swamping the system, especially with the advent of the adventure line. Each month now results in

▶

thousands and thousands of calls – a lot of person-hours to enter the details into the computer for analysis. Fortunately most callers know their minds and state their business efficiently. But there are the 'gigglers'. These fall into two broad categories – those who start to giggle, put a brave face on and somehow get through (a sub-group are those who break down completely but manage to ring back minutes later and get through the rigmarole okay); and then there is the second group who probably never intended a serious vote in the first place, start giggling, then turn the call into something else altogether. It's just as well that the team taking the details are broad-minded! Unfortunately this telephonic incontinence wastes a lot of time, especially when you get a bunch of people with unlimited funds for the phone who like to ring continuously and practise their party jokes or Capital Radio's DJ of the year competition entries. It's funny how the thought of an unmanned answering machine attracts the attentions of bored people! Still, when there's the time, these calls can provide hours of amusement at the CRASH offices. But we would prefer to just get the votes!

Roger Kean

CRASHTIONNAIRE WINNERS

The winner of the CRASH Questionnaire draw was J.S. **Underhill** of Bromley, Kent, who wins £50 worth of software of his choice plus an ubiquitous CRASH T-shirt. The three runners-up each get a T-shirt plus a three-month subscription to CRASH. They are **Philip Brown** from Hove, East Sussex, **Christopher Powell** from Oswestry, Shropshire, and **Kevin Speiers** from Croydon, Surrey.

I would like to thank all those who took the trouble to fill out and send in the forms, which are still being collated for a final result.

ONE CHR$ INKEY$

A new CRASH column which reflects the personal views of people who either read or write for CRASH. This month G.G. Watson, from Althorpe, South Humberside, hammers home the message.

HAMMERING HOME THE MESSAGE

By G.G. Watson

As you lean back in your chair, monsters stare out at you with their glowing multi-coloured eyes. Space ships zapping anything, or anyone in their way, streak through sectors of the galaxy never visited before. Robots stumble across alien landscapes, tanks rumble through the ruined remains of planet Earth. Racing cars speed round and round. Frogs and all manner of creatures and entities hop and leap across imaginary dreamscapes. Evil beings and wizards cast their spells in devilish plots to enslave humanity. Unprotected man has only his wits to keep him alive.

No, this is not the scenario for a complex new computer game! It is a subjective impression of the garish, sensational, software advertisements contained within the pages of any popular computer magazine you might care to mention.

How exciting the new world of the home computer looks! These sparkling images entice us to immediately go round to our nearest computer shop to part with our money. Yes, be the first to own the electronic game which will strain the skills and intelligence of you and your friends to their limits. Dazzle the neighbourhood with this brilliant new toy. Those are some of the things advertisements tell us.

Even negative reviews of a game cannot quite convince us that it will not spend much time on our television screen if the advertisement in all its glowing imagery has hooked our interest.

The advertisements for computer software, and hardware, are slick and professional. It is only a pity the games and machinery that they sing the praises of so well do not always quite live up to their inflated and verbose lyrics. Which leads me to wonder if the people who produce the advertising artwork and literature should perhaps try to educate computer programmers and designers how to produce material that has an equal impact on our senses.

Many commentators have noted the parallels between the computer software industry and the pop music industry. Indeed, some computer companies have encouraged this comparison by attempting to make their programmers into 'stars'.

Although this reflects the fast growing popularity of home computing and its status as a form of entertainment, it also means that hype and image become more important than the product.

Taken to its extremes, can wa one day expect to see screaming teenagers chasing after the programmers of their favourite games? Will prime time television shows feature the 'Top of the Floppies' and contain promotional videos of programmers dancing Michael Jackson-type steps across back-projected images of their latest game?

This might sound funny but it is not long ago that many games were produced in houses, garages, and crummy little offices. Now plush office suites and expensive, extremely fast, sports cars which lurk outside in the executive car park, are the order of the day.

At the moment the software industry is booming and new talent is quickly utilised and promoted, just in the same way as the pop music industry grew and developed in the Sixties. But whatever happened to the music scene in the Seventies? It plummeted to the depths of banality and had to be knocked into sense by the punk revolution! Is this what will happen to the software industry in the Nineties or late Eighties? Will the hype and image being generated so carefully now kill off the creative flair and instanct that still survives today?

Only time and the consumers will hammer home the answers to these questions, let's hope everyone concerned will fare better than most space invaders or pacmen!

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sinclair
Driller Tanks
Zipper Flipper
Eric & the Floaters
Match Point
Stop The Express
Bubble Buster

A fine day for tennis on your Spectrum

This is Wimbledon.

The home of British tennis, enjoying Britain's fine weather.

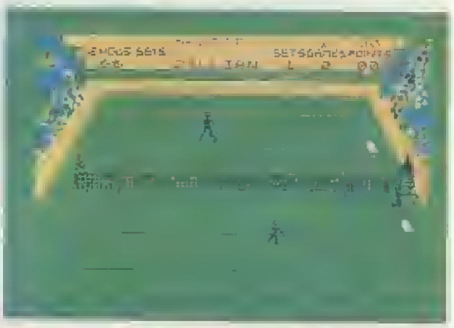
But this summer, things will be different. If rain stops play on court, you'll be able to carry on playing – with Sinclair's 'Match Point'.

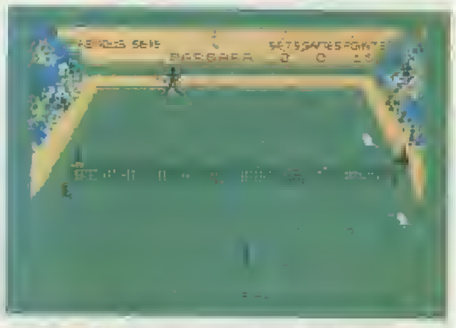
'Match Point' is one of six new, all-action programs for your Spectrum. It lets you play tennis against the computer, a friend, or just sit back and watch an exhibition match.

Enjoy all the features of tennis – backhand and forehand shots, lobs, drop-shots, volleys, a scoreboard ... even ball boys are on-call.

But good tennis strokes aren't everything. To win the Match Point Open Championship you'll need skill *and* tactics.

Luckily, though, you won't have to rely on the weather!





'Match Point' has been developed by Psion, one of the UK's top software houses.

You'll find it alongside Sinclair's other new titles – Stop the Express, Bubble Buster, Zipper Flipper, Eric and the Floaters and Driller Tanks – in the shops, today.

At £7.95, it's a real winner!

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A Crash Smash

W·T·H·A·S

Worse Things Happen at Sea

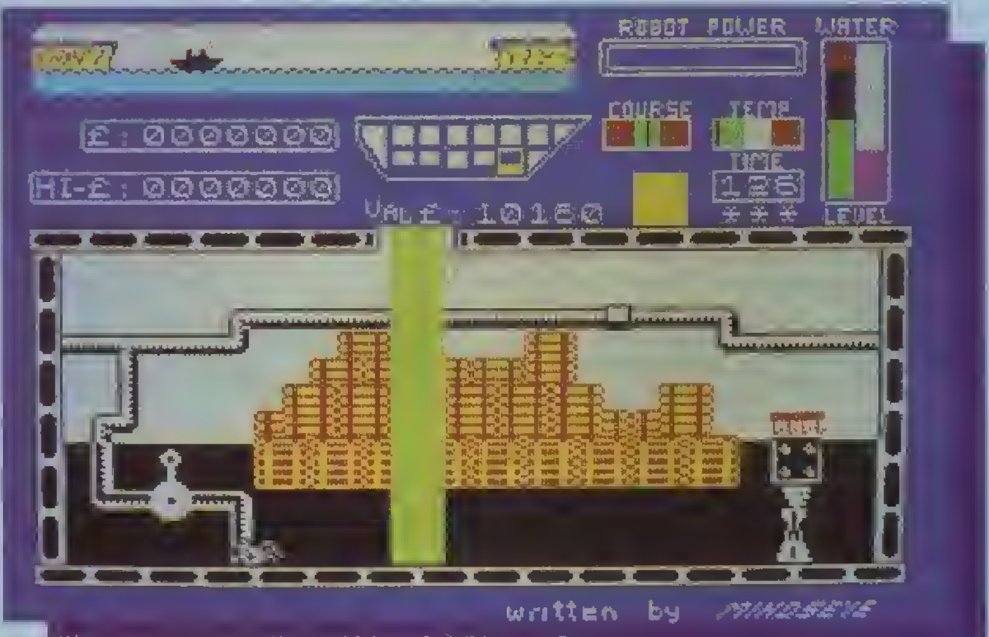
Producer: **Silversoft**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Mindseye**

It's hard to believe, looking at this latest **Silversoft** game, that worse things could possibly happen at sea, but perhaps the author was referring to R & R's *Titanic* when he thought up the title, or perhaps he was thinking about White Star's Titanic – that wasn't a game!

Here you are called upon to safely take a cargo ship from port to port. A diagram at the top of the screen shows the ports and your ship with a navigable distance that would take a few moments' freestyle to complete for the poorest of swimmers. Judging the difficulties you are about to face from this innocent little diagrammatic representation would be foolish in the extreme!

You play the part of a robot (it's an automated ship this one), and one can only suppose that the authorities allow the ship to leave port with its seaworthiness certificate signed because it only carries a crew of one, and a robot to boot. Boots, however, are of little use – throat length waders would be more appropriate, because this ship starts sinking the second it leaves port!

The ship consists of 11 areas, six on the top deck and five below. Each area is sealed off from the next by hatches, and hatches in the floor of the top deck access to lifts to take you down below. The top right-hand area contains a materialisation machine, from which your robot starts life, and next to it, a recharge chamber for restoring the robot's power which is drained by work. The other rooms contain nefarious bits of equipment, but it is the pipe and pumping handles that are important. A patch is also supplied in each area, but only six pump handles for the 11 pumps.



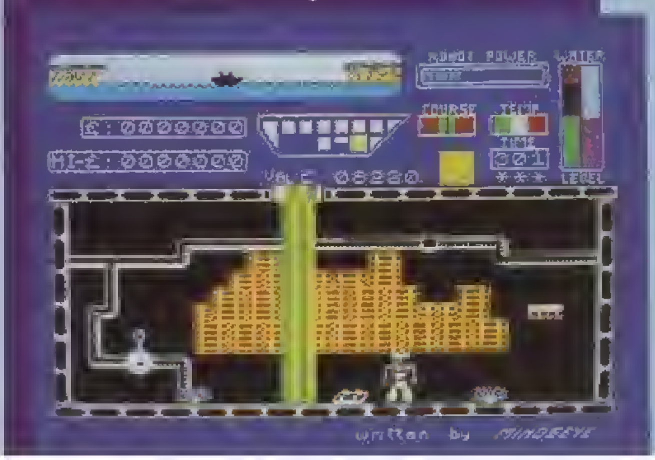
We went to sea to see the world, but what did we see?..

The sad state of the ship can be immediately seen on the lower deck where numerous leaks are letting the sea gush in. The rising level of water is shown by the normally white background turning black. The robot has several tasks which include opening and shutting hatches (green or red lights show above the hatch on either side, indicating whether it is open or closed), picking up patches and placing them over leaks and then pumping out the water in the particular room. Of course, you can only carry one thing at a time. Hatches should be left closed, as this slows down the rate of flooding between sections, and indeed, it isn't possible to pump out a section if all the doors are open, as the water flows in too fast for the pump to cope.

The screen display is very busy. About two-thirds is taken up with the depiction of a room. Moving through a hatch results in the display scrolling across to be replaced by the next room entered. Above this is the score and hi-score (shown in £), a diagram of the 11 rooms with the one you are in flashing (also the effect of rising water), a yellow square which indicates what object you are carrying, a bar code showing robot energy, a course indicator (the robot has to keep the boat on course as well!) and gauges for temperature, water level and cargo value. As the water rises, so the cargo value sinks.

Docking successfully at port results in your cargo remaining being evaluated for points. Lives are lost by running out of power, although to help a rapid return to the recharge chamber you can hyperspace, but this might take more energy than is left. Also, the robot short circuits if he's operating under water, and this drains power faster. Should the ship sink, you at least have the satisfaction of watching the event on the screen at the very top.

. . .We saw the sea — coming in!



CRITICISM

- 'This is a super-original game from Silversoft. The graphics and detail are very good and the game is very playable and addictive. I really enjoyed it and I'm sure this game will be a huge success. It's probably one of the most original games of 84 so far. There are many features in the game to make it varied enough to give it lasting appeal – excellent!'

- *'I am amazed that such a simple idea – using a trusty robot to plug holes in a leaky old ship and keep it afloat – should prove to be so much fun to play. The side view of the ship is extremely pleasing graphically and well detailed and coloured. I found that after completing a few successful crossings that worse things began to happen at sea. For instance the ship kept going off course, the engine overheated due to lack of oil, and more holes appeared in different places. Several great tunes are played, and the sound during the game is good. Silversoft have produced an incredibly addictive, playable and attractive game.'*

- 'There are some games you come across that, based on a simple idea, are nevertheless completely compelling – this is one. *Worse Things Happen at Sea* is a nightmare of activity. At first it all seems fruitless, as

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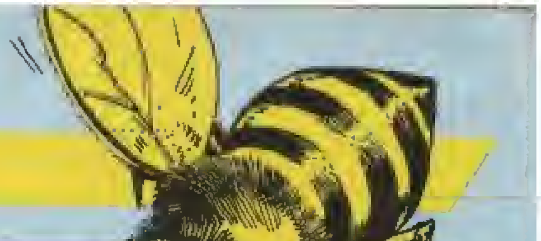


though you can never keep the ship afloat, but as you get better it seems easier. Unfortunately, the game has been programmed to grow with you! Oiling engines and steering wheels are added to the already Herculean tasks of pumping and patching. The graphics are really very good, crisp drawing and good colouring. A massive choice of keys is offered and the keyboard is very responsive too. All in all an excellent, original game. Great instructions on screen too.'

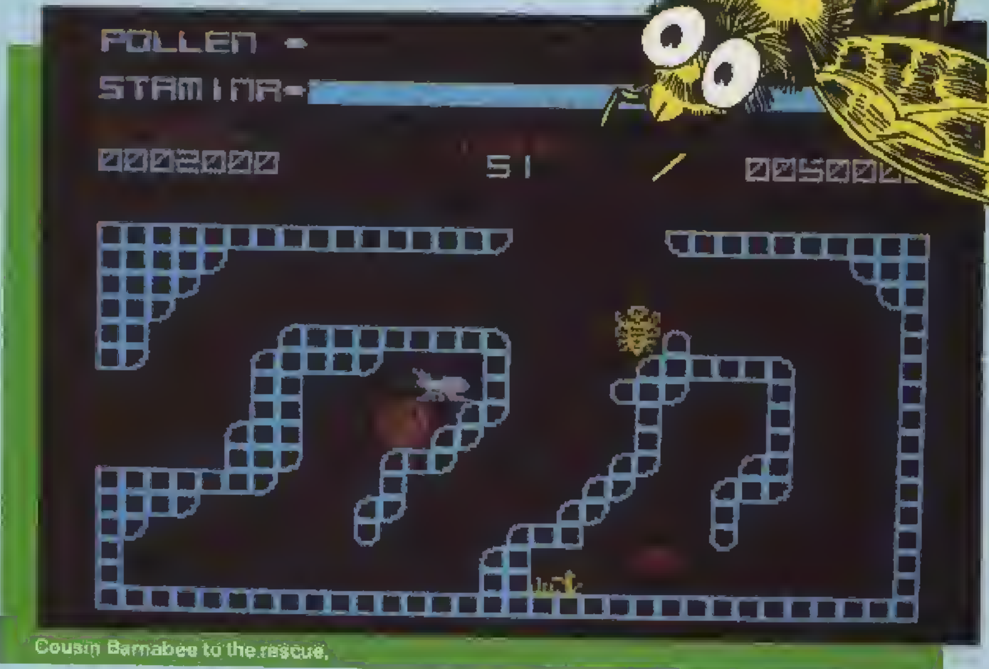
COMMENTS

Control keys: Q/W left/right, E/R up/down, T = door/take, X = pump/power. There are five other combinations offered including cursors and Sinclair
Joystick: Kempston, Cursor types, ZX 2
Keyboard play: excellent responses
Use of colour: very good
Graphics: very good, plenty of detail and nice touches
Sound: great tunes, very good throughout
Skill levels: progressive difficulty
Lives: 3
Screens: 11
Originality: very high based on concept and playability
General rating: addictive, playable, generally excellent.

Use of computer	88%
Graphics	89%
Playability	92%
Getting started	86%
Addictive qualities	94%
Originality	95%
Value for money	93%
Overall	**91%**

Antics

Producer: **Bug-Byte**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Adrian Sherwin**



Cousin Barnabee to the rescue.

In the time honoured cinema tradition of 'once you've got a hit on your hands – hit it again', *Antics* is *The Birds and the Bees II*. It can't really be called *Son of Birds and the Bees*, since the hero of *Antics* is Barnabee, who happens to be a cousin to Boris Bee, the hero of the previous game. (Some of these games recently are getting a cast list as complicated as a Shakespeare play!).

The scenario states that Boris Bee (he of *B&B* fame) has been set upon by a vicious gang of ants and locked away somewhere within their nest, to await a terrible fate (what, worse than death?). Fortunately for Boris, help is at hand in the shape of his cousin Barnabee, who is about to launch a daring mission of rescue.

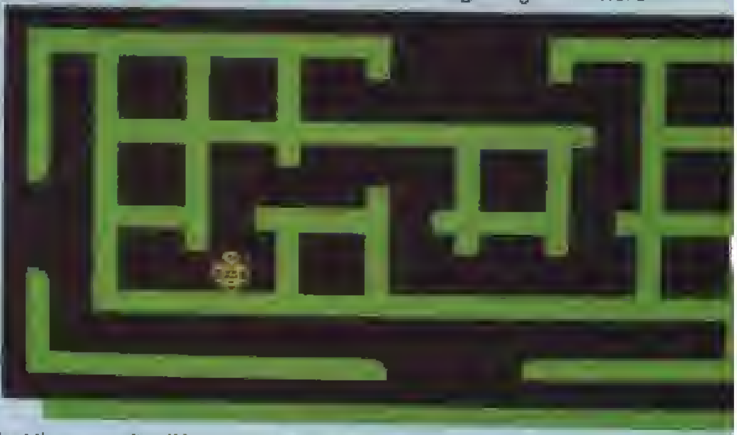
The game takes the form of a large number of interlinked mazes which represent the various layers of the ants' nest. Barnabee starts off above ground by his hive and can fly to the right through four screens avoiding the blue birds which kill on contact. In screen three and four there are entrances to the ant complex below ground. The object is to discover the whereabouts of imprisoned Boris and rescue him. Boris will follow Barnabee if he is close enough, but Boris is weak, so you have to fly slowly on the way out back to the hive.

The nest is infested with ants and beetles. Contact with these creepies will sap Barnabee's strength (Bar code above) but visiting the flowers that also live in the nest will restore strength through pollen. Some flowers have the property of opening up walls in the mazes when they are visited. The wall opened may not be in the maze on screen at the time. In some mazes the walls are weak and will collapse as Barnabee touches them. There are also energy-sapping thorns embedded in the walls of the mazes.

Antics is played to the tune of Bach's Tocata Fuge in D – a sort of jazzed up version. Is that why J.S. Bach appears in the halls of fame along with Mrs Mopp, AAAAAAA and Mr. Spock? There's also Dr. Jones Did Not Believe it in there too.

CRITICISM

- 'Don't prejudge this game because it's a follow up to *The Birds and the Bees* – it does have the same style graphics, but the game itself is much better. Also, saying the game is totally arcade would be wrong; there are several elements of adventure and even strategy involved. The graphics are well drawn and colourful. Although not a great deal is going on on the screen at once, don't worry – ants and beetles are surprisingly difficult to outrun and keep you active enough. The sound is just great with a well-known tune played continuously (like *Manic Miner* and *Jet Set Willy*). This can be switched off if it drives you mad. The keyboard laybout is just perfect (in fact same as JSW). The bee flaps his wings very realistically and does have forward momentum (you can't stop dead right away). Overall a highly addictive game – I must just have one more go before switching off . . .



- *'This is a great game. There isn't a lot more I can say. It's got great graphics, continuous tunes, it's playable and addictive and I think it's excellent.'*
- '*Antics* is a polished piece of software with many neat graphics touches like the scrolling Hall of Fame, the names

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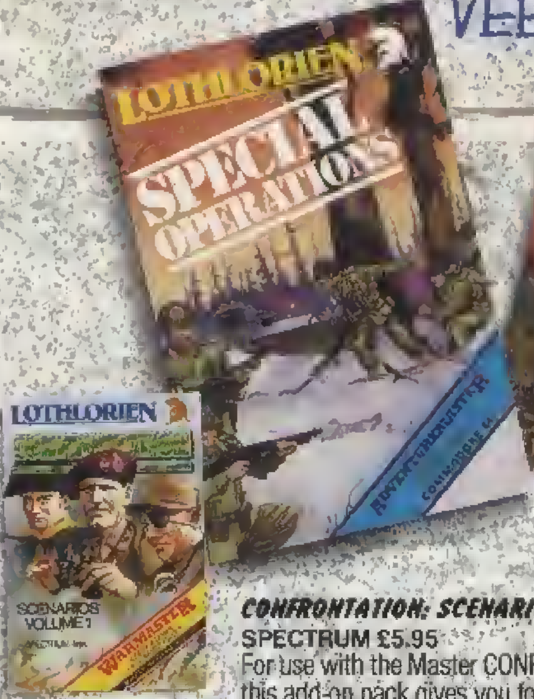
VEE HAV VAYS TO MAKE YOU ILL



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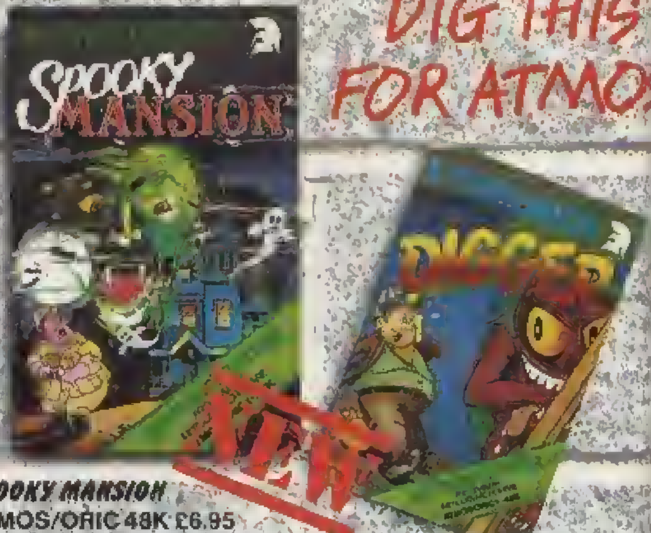

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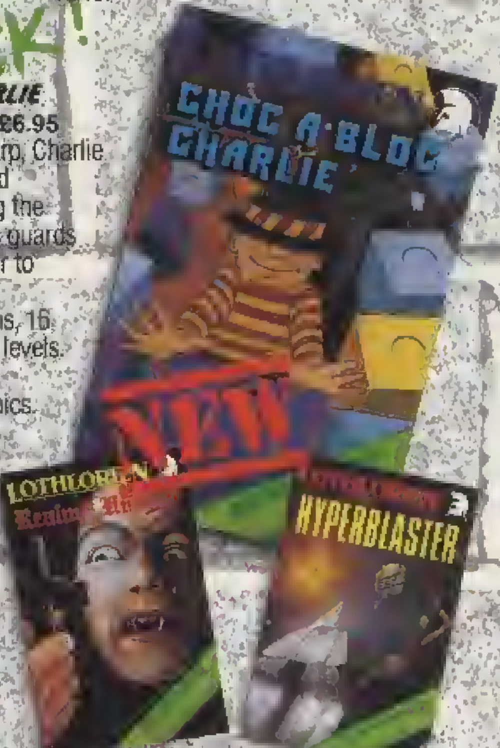

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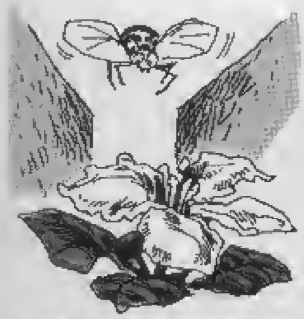

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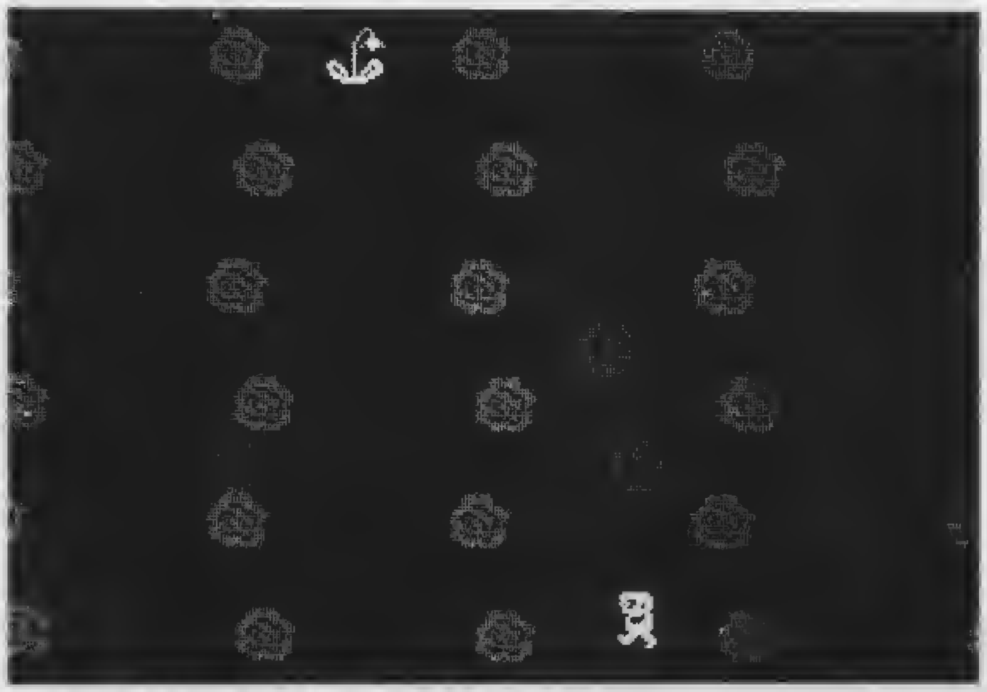
scrolling up while disppearing behind the horizontally scrolling game details. Simple keys (left, right and flap wings) make control something that you don't have to think about, although any joystick will work, the keyboard is better. What makes *Antics* a non-standard maze game is the adventure element whereby visiting certain of the flowers allows exits in the maze which weren't there before to open up. At first I thought Antics was a charming looking game with not much going for it, but a few minutes playing soon cures you of that. Controlling Barnabee is a difficult task as he has a high inertia – guiding him through narrow openings in a vertical wall can be very frustrating when stamina is running out. This is a game that needs a map drawn! Very playable and surprisingly addictive.'

COMMENTS

Control keys: Q/W and alternates on rest of row = left/right, bottom row = flap wings, S = sound on, A = sound off.
Joystick: any
Keyboard play: with three keys, very easy; keys are responsive but it takes getting used to the momentum factor
Use of colour: excellent
Graphics: excellent – smooth, detailed, fast and clear
Sound: excellent – continuous tune which manages to continue while a death rattle sounds if you lose your life!
General rating: original, playable and addictive – excellent value and highly recommended.

Use of computer	89%
Graphics	90%
Playability	92%
Getting started	87%
Addictive qualities	92%
Originality	87%
Value for money	90%
Overall	**90%**



Smiffy gives up computers for gardening – but is it a wise decision?

Revenge of the Killer Tomatoes

Producer: **Visions**
Memory required: **48K**
Retail price: **£6.95**
Language: **machine code**
Author: **Kevin Bezant**

Visions describe this game as a 'Video Nasty' – a game which gives a whole new meaning to the phrase, meat and two veg. The meat in this case is Visions' dashing young hero Smiffy, who appeared in the computer complex of *1994*. He is now enjoying a much quieter occupation – cultivating the soil. But in this garden the rows of cabbages move all over the place and it is infested with killer tomatoes (make sure they don't ketch-up with you), psycho swedes (no xenophobia intended) and manic mushrooms (no reference to any other game intended). Scoring is done by awarding points for every weed pulled, completing a day's work and points are docked for treading on the cabbages.

The screen display is very uncluttered with no score lines or other info visible – this gives a large playing area, which takes the form of six rows of large cabbages by four rows across. Alternate lines move in opposing directions. Weeds, blue in colour, appear at random points and times, also moving along with the cabbages. The killer veg moves independently, but bounces off the cabbages. Between attack waves the display informs you of what to expect next.

Game instructions and objectives are well displayed on several sheets which can be called up from the menu.

CRITICISM

● 'This is a good game featuring some very high-quality graphics – very smooth. The game is both original and playable (a rare feature lately). I enjoyed it, especially as it had a fairly high degree of addictivity.'

● *'If gardeners/programmers imagine that tomatoes, mushrooms and swedes will turn savage one day then there's no hope for any of us! A highly original idea. There's not much that can be said about this game, just that all the graphics are large, detailed, colourful and they move about the screen smoothly. After a while I found the game became tiring due to the way that the cabbages move about the screen with the other veg manoeuvring around them. You may find* Killer Toms *has a lasting appeal, but I thought that the novelty of the veg multiplying every so often not only daunting but boring. An original video nasty that won't grow on you!'*

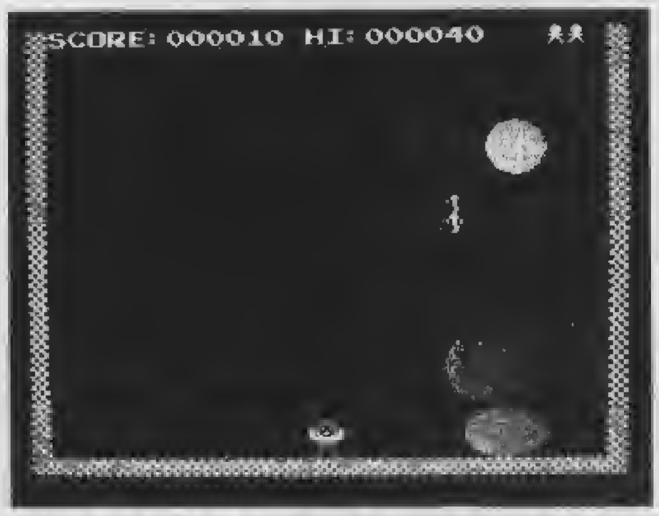
● 'The hero, Smiffy, is instantly identifiable as the hero of Visions' *1994* game, and it looks as though the same movement routine has been used. What worked in that game, works less well here, as Smiffy seems to gallop rather than potter (or whatever it is you do in gardens). The idea is original and well implemented with excellent graphics and good instructions, but once into the rhythm, it becomes quite easy to stay alive and score points. The tomatoes are the least intelligent killers, with the mushrooms being positively aggressive chasers. In later attack waves you get increasing numbers of killers and mixed veg varieties. Quite addictive, but perhaps the appeal won't last all too long.'

COMMENTS

Control keys: user-definable – requires four directional keys
Joystick: Almost any via UDK, plus ZX1 and ZX2 interfaces
Keyboard play: self-selected, very responsive

Use of colour: clear, but limited, nicely used in instructions
Graphics: very good, smooth and detailed
Sound: average
Skill levels: 10
Lives: 5
Originality: nothing else like it on the market
General rating: with a range of skill levels and reasonable addictiveness, good value.

Use of computer	81%
Graphics	78%
Playability	77%
Getting started	75%
Addictive qualities	70%
Value for money	65%
Overall	**74%**



Galaxian bubbles in a game of what goes up must surely squash you flat when it comes down.

Bubble Buster

Producer: **Sinclair**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Hudson Soft**

Bubble Buster is pretty simple to describe. You are a small man at the bottom of the screen and you can move left or right, firing missiles upwards. A large yellow bubble comes sailing in from the top left and bounces about all over the place. The object is to hit it, when it will split into two smaller bubbles. Hitting one of these will cause it to split into three tiny bubbles, and each of these hit will burst. You're dead if any bubble should hit you. Points are only scored for hitting the small bubbles and bursting them.

The first three stages have increasing numbers of bubbles. The fourth is a bonus point stage where the bubbles don't harm you and you must score as much as you can in a limited time period. After this everything repeats at a greater pace.

CRITICISM

● '*Bubble Buster* is another relatively original game provided by Hudson Soft for Sinclair. It's a shoot 'em up but the aliens are of a different breed. In fact, if you saw the recent re-run of The Prisoner on TV, you may know what they are – bubbles. The graphics, though simple (i.e. round things) are extremely well animated. The bubbles move just like the real thing with gravity involved to make them bounce about all over the screen. I found this to be a very original shoot 'em up type of game – it had a fair bit of addictivity but did tend to become a little repetitive. Perhaps a little variation would have improved the situation.'

● *'Why Sinclair should have put out a game as simple as this one makes me wonder whether they ever designed computers in the first place. Shooting balls with what looks like an arrow tied to a piece of green gardening string is not very thrilling. This game does have an element of "Asteroids" when balloons split – but not very effective. Both colour and sound are weak and could be improved upon. The keys are responsive but not well positioned. Overall, a fast, completely uninteresting game.'*

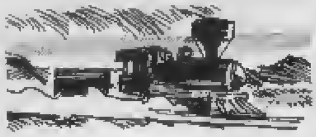
● '*Bubble Buster* is a very simple idea, which turns into a pretty fast game the further you go. However, the initial fun wears off very fast too, as there's little more to it than shooting balloons and dodging them. I'm not saying this is an easy task, but some of the difficulty involved is a bit unfair. "You" are just fat enough a character to get hit by the balloons too easily, so there's no fine adjustment possible, which lowers the skill factor. And that together with the extreme simplicity of the game means it isn't very thrilling to play for more than about ten minutes. The graphics are reasonable, with good bouncing effects, but "you" are a bit primitive looking, and couldn't a bit more fun have been added with some more colours? Not really worth it.'

COMMENTS

Control keys: A/D or J/L left/right, CAPS/SPACE = fire
Joystick: ZX 2
Keyboard play: responsive, but slightly irritating with the left/right key
Use of colour: poor
Graphics: large, fast, not detailed
Sound: fair
Skill levels: progressive difficulty and speeds
Lives: 3
Originality: not totally original as concept seems to be based on several others like Asteroids, Galaxians and Breakout
General rating: fair.

Use of computer	70%
Graphics	61%
Playability	53%
Getting started	66%
Addictive qualities	45%
Originality	45%
Value for money	58%
Overall	**57%**

Casey Jones



Producer: **Blaby Computer Games**
Memory required: **48K**
Retail price: **£5.50**
Language: **machine dode**
Author: **Gary Capewell**

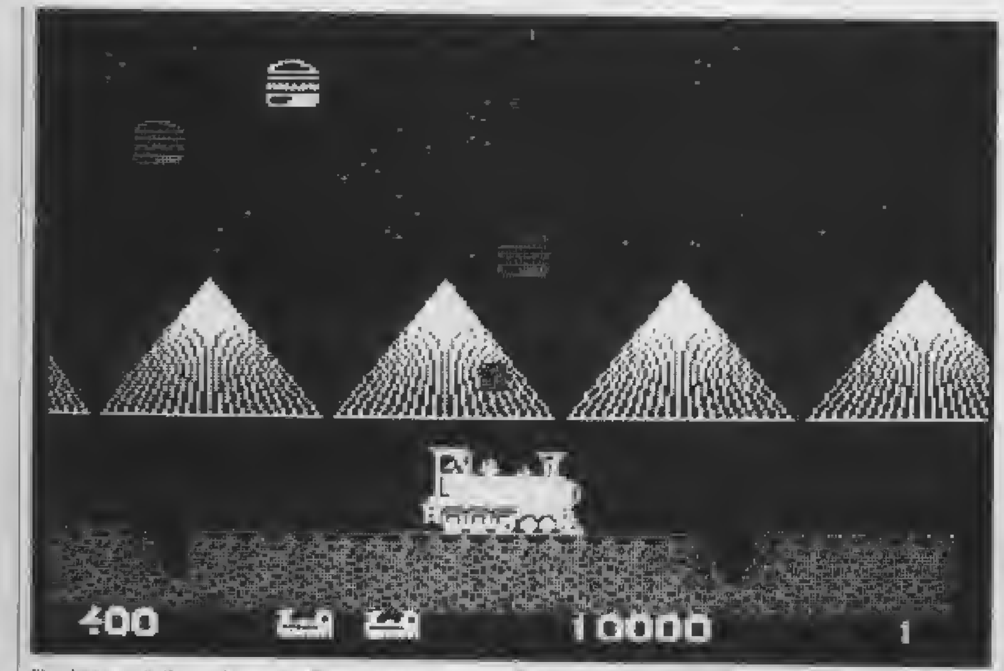
Blaby packaging has always been quite novel and with *Casey Jones* the company has gone on to the larger plastic cassette case with a cover insert which shows a lovely photograph of an old American Loco belching smoke as it rushes along the track. There was a critic whose words appeared in this magazine who said once that he couldn't understand why software houses always insisted in educational games of illustrating the word TRAIN with a picture of a steam locomotive when they disappeared from our railways almost two decades ago. Well, in *Casey Jones* the anachronism is obviously quite intended. As it says on the cassette blurb, 'Here's your only chance to pilot a steam engine. Not only does this train fly but also has an unlimited supply of megatron missiles.'

Wouldn't John Wayne have loved it!

The anachronism goes even further of course, for *Casey Jones* is really a Moon Buggy type game where you must leap the craters and obstacles, shoot away those too big to leap, and contend with murderous 'aliens' hovering above you. 'The 12.15 from Bournemouth is delayed due to hostile alien activity . . .'

The screen presents you with a graphic representation of the steam loco on the cover which travels left to right against a scrolling background of rails, fences, telegraph poles and mountains. The aliens drop bombs which will destroy the engine if it's hit, and which leave fires burning in the ground – these also destroy the engine. Getting through all the attack waves and reaching the station will launch you on to the track again with a tender behind the engine, making a bigger target.

The aliens in this game are unusual. The first wave consists of barmy burgers – a reference to Blaby's game of the same name; from then on there are various 'in' joke references with aliens ranging from Eugene's toilet, Horace to camels, Access cards and Daleks. Eighteen attack waves in all.



It's a long way to the station on the Blaby Chatanooga Choo Choo.

CRITICISM

● 'This is a "Moon Buggy" type game but with a train. The use of sound and graphics is good. Generally everything is good except for playability; the train is an easy target and its jumping must be closely timed. The game seemed too hard to be fun – it was more of a task. Even so, it is reasonably addictive as it's always nice to see what the next attack wave is and so on.'

● *'The game is quite difficult until you get the hang of dodging bombs. Your train flies very well, and for the first time with this type of game you can move the train left and right (well, backwards/forwards) in mid-air – very useful. To each wave there is a different alien. Reaching the station is quite a task – and then you play the game again but with a tender attached, and this is much more difficult. The graphics are detailed and varied, and colour is well used. The sound is fair and could have been much better. This is an original graphic presentation of the standard "Moon Buggy" concept.'*

● '*Casey Jones* is fun and hard at the same time. The graphics are fun because they are original and large and they all move quite well. The train does present a rather large target for the alien bombs which adds to the game's difficulty, on the other hand the programmer has made it the most controllable vehicle of its type. You can take neat little hops or gigantic run-at-'em leaps. With so many attack waves there is plenty to do, but perhaps there could have been more levels of play. All in all, fun and addictive in play.'

COMMENTS

Control keys: Z/X left/right, L to jump and ENTER to fire
Joystick: Kempston
Keyboard play: good positions and very responsive
Use of colour: very good
Graphics: large, detailed, quite fast and smooth
Sound: mixed feelings from very good to average – it is quite powerful though
Skill levels: progressive difficulty
Lives: 3
Screens: 18
Originality: game type is quite common now, but presentation is highly original, a fact which is reflected in the rating below
General rating: an above average to good game with new features and quite addictive to play.

Use of computer	70%
Graphics	74%
Playability	62%
Getting started	71%
Addictive qualities	64%
Originality	68%
Value for money	69%
Overall	68%

Turtle Timewarp

Producer: **Perfection Software**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Tim Williams**

Perfection entered the games software business with a flourish and their game *Odyssey 1*, which won a programming prize. *Turtle Timewarp* is their fourth program, set in a world disrupted by thermonuclear destruction. The last humanoids have gone leaving behind turtles which have not suffered mutation like all other creatures because of some unstated alien intervention. As the biggest and strongest turtle you must go around collecting smaller turtles and carry them off to the dubious safety of houses left behind by humans. Using the timewarp gate provided by the aliens, you must go from land to land collecting all the turtles.

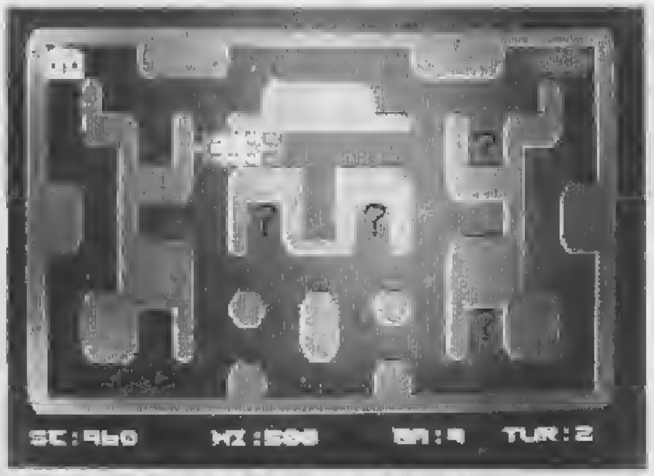
In this doom-laden 'Day After' world, all the mutated creatures fancy a bity of turtle and your only hope is to drop a stun bomb in a mutation's path. This leaves it safe to cross over it for a short period, but there's only one stun bomb allowed on screen at any one time. Extra bombs may be obtained from the lair which appears at the centre of the screen from time to time.

The screen takes the form of a simple maze with several dead ends. Tucked into the dead ends are large sized question marks, eight in all. At first you are chased by two mutations, but the question marks may be small turtles or they may be more mutations which will give chase after two seconds. If it's a turtle it will climb on your back and a humanoid house will appear somewhere on the screen. You must deposit the small turtle safely and then go for another. When five have been rescued the timewarp gates will appear in the centre of the screen and you may move to another land where there will be more mutated creatuires to chase you – of course! The maze forms are different on different screens.

CRITICISM

● 'Yet another original game with a great idea. The screen layout is quite good although the graphics range from fair to good. Colour could be better used. Teams of mutations tend to gang up on you giving no chance to get away – this does tend to make a fairly simple game into one much more difficult. The timewarp gates rotate very well. The sound is fair during play but there is a great, well-known tune, while the computer waits for a key. Quite a good game from Perfection – again, this one lacks something on the content side, but this improves after about 10 minutes of continuous play.'

● *'I must say, I found the turtle a little hard to control because this is one of those games where your "man" moves under his own steam, changing direction with a keypress. Still, you get the hang of that quite quickly. A joystick certainly helps, as things move very quickly once there are several mutations after their dinner, and in this respect the game is very good as it has user-definable keys to suit most joysticks. The graphics are a bit variable with a some-*



Open the box – or take the money and run? Turtle Timewarp.

what simple looking turtle that isn't animated. But he does curl up nicely – or withdraw into his shell, should I say, and the mutations are very effective. Quite addictive.'

● *'Turtle Timewarp* calls for a fair amount of skill in getting safely round this hazardous series of mazes, especially as the chasers are quite intelligent. The idea of never knowing whether you are about to catch a turtle or a nasty cold does keep you on your toes. I liked the game and found it addictive because it does get very hard as you progress.'

COMMENTS

Control keys: user-definable, four needed for direction and one to drop bombs
Joystick: almost any type via UDK
Keyboard play: responsive
Use of colour: although generally good, perhaps it could have been more varied
Graphics: quite detailed, reasonable in movement
Sound: only useful beeps during play, but good tune
Skill levels: progresive difficulty
Lives: 3
Screens: 10
Originality: a novel type of creepie based on the maze format
General rating: above average to good with addictiveness.

Use of computer	83%
Graphics	70%
Playability	72%
Getting started	73%
Addictive qualities	70%
Originality	68%
Value for money	69%
Overall	72%

Froot Loop

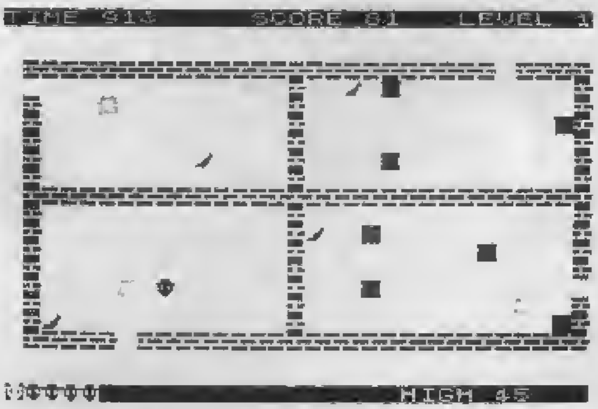
Producer: **NTD Software**
Memory required: **48K**
Retail price: **£3.00**
Language: **machine code**

Froot Loop's a pretty simple game to describe. You are a small black face on the outside of a series of variously shaped rooms with single entrances to them. Inside the rooms there are green apples which you must go round eating. In some rooms there are pale blue squares which kill you off if you should run into one. Now and then the apples go rotten and picking one up will also kill you off. However, when this unseasonable occurrence takes place, dark blue bananas appear in some rooms, and eating one of these will unaccountably restore the rotten apples to wholesomeness once more.

To make life more difficult, there are guards patrolling the outside of the rooms. Should one get too close you can hit the panic button which will freeze the guards for a moment. On some screens, the apples are entombed within rooms lacking doors. You are also provided with a blaster to shoot out the walls. Both blaster and panic button eat heavily into your time limit, and all the apples must be eaten before this is up in order to progress to the next, more difficult screen.

CRITICISM

● 'I couldn't see any point in playing this game whatsoever. What's so fantastic about eating apples and bananas, whizzing round the block at super speed? The graphics are small and insignificant, moved by the block, although quite detailed and fast moving. The brick walls are quite well drawn, but the guards look more like jugs! The keyboard layout is good, being very responsive – perhaps over-responsive. But it's a poor-quality game with an unknown joystick option.'



Jug-eared guards, rotten apples and blue bananas to drive you nuts in Froot Loop.

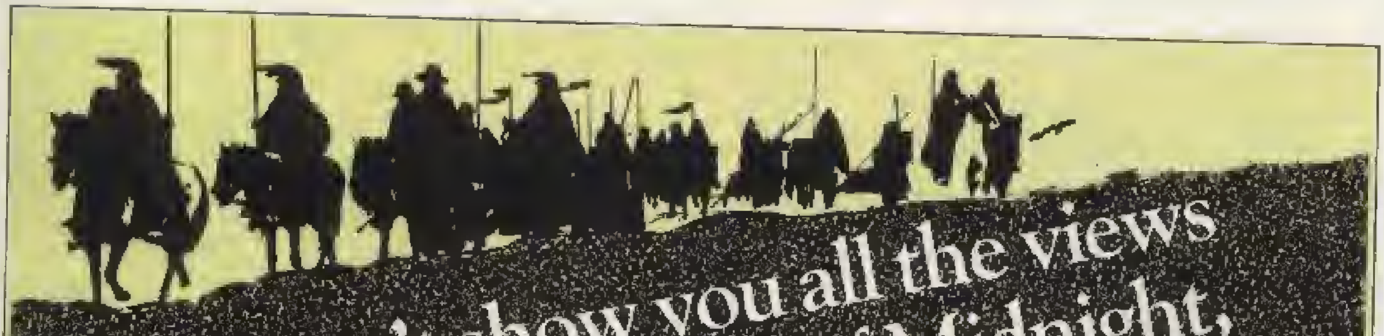
● *'There is a sort of manic quality to* Froot Loop *which might appeal to some, but it didn't to me. The scroling up of the screens at the end when you have cleared one is nicely done. But as to the game itself, I wouldn't recommend it, as there is so little to it. Yes, on the higher skill levels it is fast, but insanely fast, pointlessly fast. When will software houses wake up to the fact that sheer speed in a game isn't what makes them difficult.'*

● 'For about half an hour I think *Froot Loop* might appeal as a somehwat mindless pursuit, but it's appeal is bound to be limited because there isn't much to do, and in the end too many lives get lost not through lack of skill but because the man is too hard to control well – at least he is with a joystick (programmable, because the joystick option stated on the inlay doesn't actually say what protocol it's for). Amusing for a while, but the primitive looking graphics and the lack of anything worth while to do makes it unaddictive.'

COMMENTS

Control keys: Q/A up/down, O/P left/right, BREAK = blaster, 1 = panic
Joystick: unstaled
Keyboard play: better than with joystick, as keys well laid out and responsive
Use of colour: average
Graphics: block, small fast moving
Sound: average
Skill levels: 6
Lives: 5
Screens: 10
Originality: well there's not much else like it, but collecting items and dodging guards isn't all that original
General rating: below average, but better value for money due to price.

Use of computer	60%
Graphics	51%
Playability	48%
Getting started	53%
Addictive qualities	38%
Originality	44%
Value for money	58%
Overall	50%



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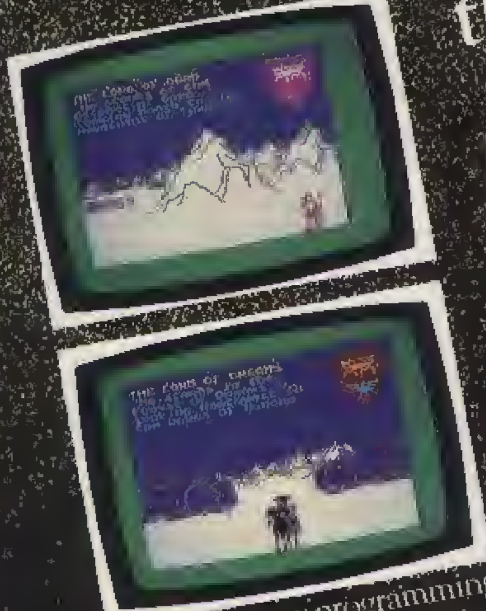

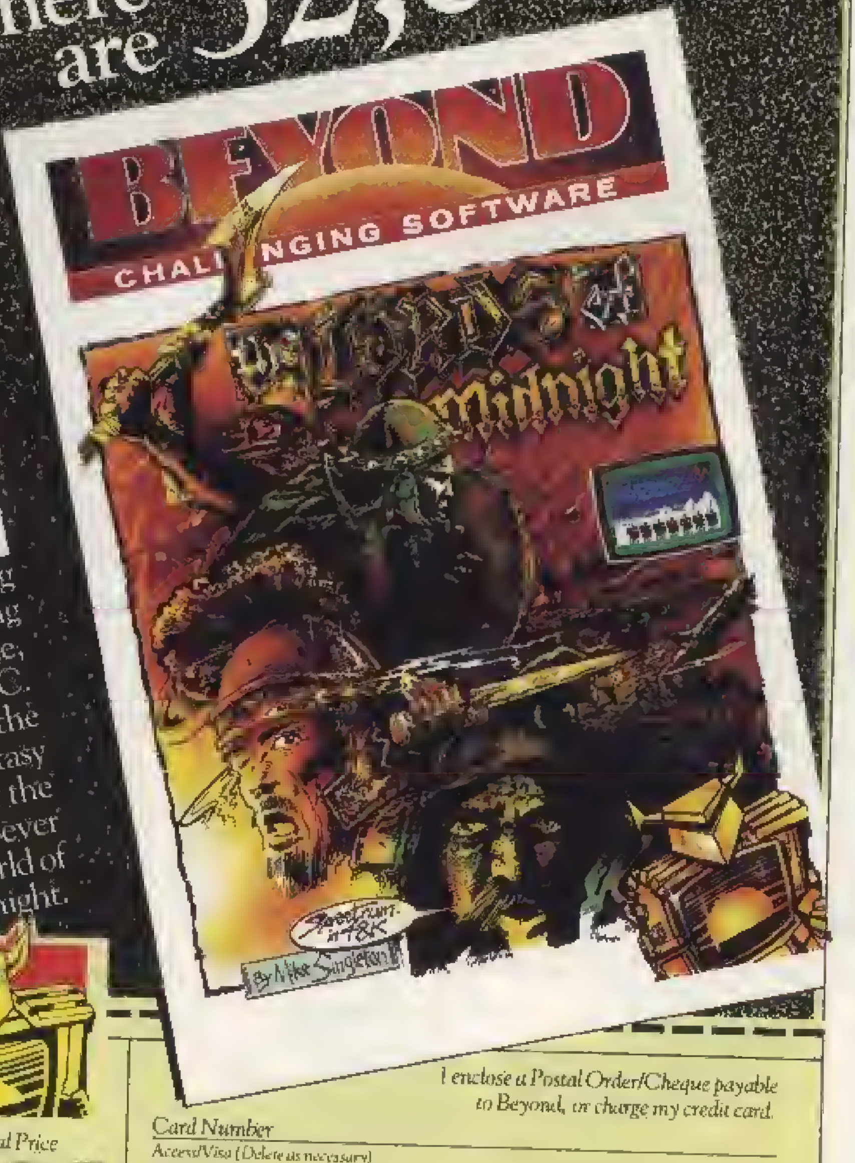

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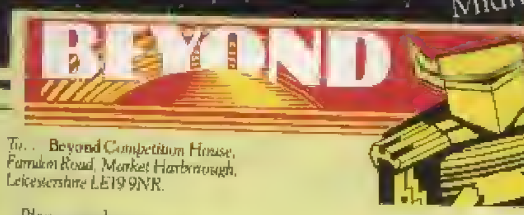

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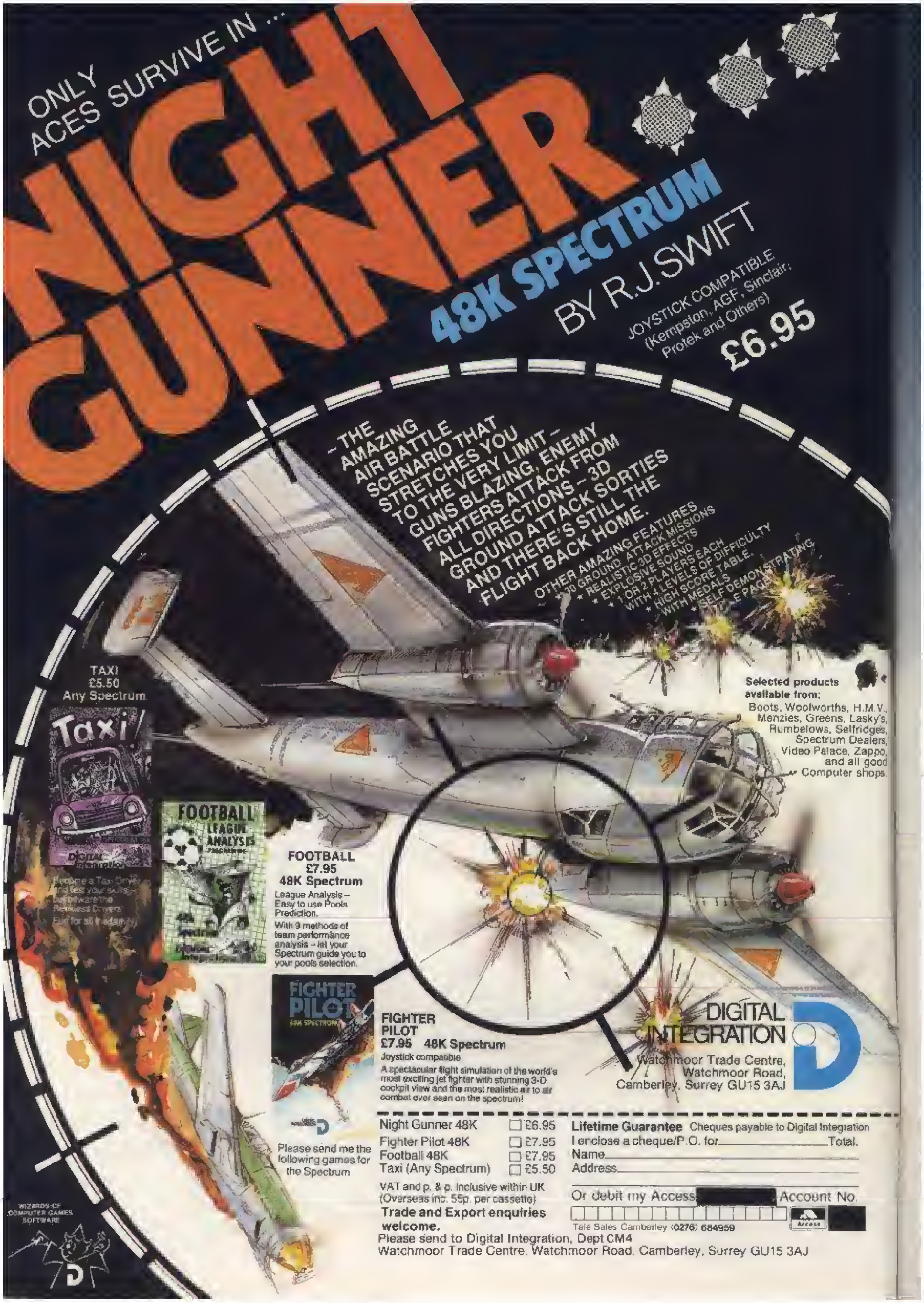

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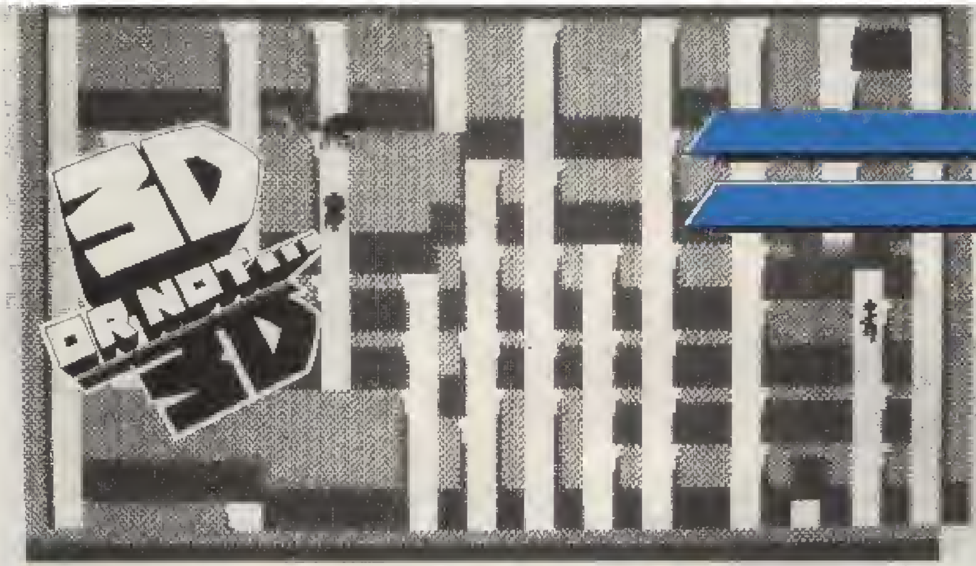
How three dimensional is the 3D game? Software houses have been sticking the prefix 3D on computer games for some time now. It's supposed to help them sell better. But does 3D work, and are all the games labelled as 3D really 3D? CRASH makes an attempt to put things into perspective . . .

3D OR NOT?

At a small gathering of the computer press held by **Hewson Consultants** in mid-May, programmer **Steve Turner** presented a short lecture on 3D in computer games. Steve is known for his trilogy of 3D games produced by Hewsons around the Seiddab theme. Both Steve Turner and Hewsons are concerned about the definition of 3D, and feel that the press should attempt a definition of it. At the gathering Steve put forward his own definition:

'The player should, for the majority of the playing time, appear to be immersed in a dynamic playing area. There should normally be some approximation to true perspective unless other sufficient strong 3-dimensional cues are present.

'This definition allows two main types of game to be classified as "3D". In the first type the player is represented by a figure on the screen but his view is from a fixed position above and outside the playing area. 3D effects are generated by strong visual cues in the shapes and shading of the playing area. In the second type the player is not represented on screen but instead has an "eyeball" or "cockpit" view of the playing area. He can manoeuvre within the arena and 3D effects are generated by perspective and parallax using a vanishing point.'



LOOKING BACK

3D arrived in home computer games before the Spectrum. **Malcolm Evans** (New Generation) had written his *Monster Chase* (we misleadingly implied his game *Escape* for the Spectrum was his second when it was actually *Monster Chase)* for the ZX81 – a classic example. When the Spectrum arrived on the scene there were a few rapid conversions of 3D games to take advantage of the better graphics and colour. The prefix '3D' was immediately recognised as a 'selling point' and was often employed quite untruthfully. A not uncommon trick was to add shading to the edges of, say, a maze and call the result 3D even though the game actually played like any other 2D game.

But before games can be defined as 3D or not, it's important to establish exactly what 3D is.

From the earliest of times mankind has been driven to represent the real world he sees about himself as an image on a flat surface. The caveman painted on cave walls, Leonardo da Vinci had his canvas and George Lucas uses the cinema screen. What is common to all three is that they must convert the three dimensional inspiration to represent it on a two dimensional area and then convince the onlooker that what he is seeing is real.

MAKING REAL WHAT IS NOT

Humans have two eyes, set slightly apart. Each eye provides the brain with an image, but these images are offset from each other by a tiny amount. You can achieve triangulation (a method of judging the distance to an object) as long as there are two triangulation points. The eyes form two such points, and as a result of the offset images, the brain is able to calculate distance and therefore depth. It is this sense of depth which we perceive in the world around us that has driven artists to recreate it in paintings.

During the renaissance period (starting about AD 1290) artists began to examine the concept of perspective and within another century had worked out the mathematics required to reduce the seen world to a flat canvas in such a way that an onlooker could believe he was really seeing a suggestion of depth in the picture. None of these devices has changed over the intervening years, and today's computer programmers must still use them if they wish to create a three dimensional image.

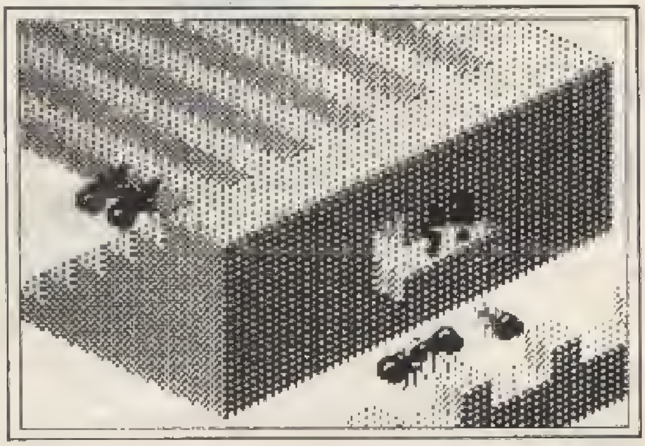
Perspective is the most important, but there are other visual cues which tell the brain that an object has depth. The classic form of perspective is usually referred to as **Vanishing Point Perspective.** Put simply, this says all parallel lines converge at a point on the horizon (see figure 1). From this simple concept, all other forms of visual cue emerge.

It doesn't take much imagination to take this concept a stage further and state that an object nearer to the observer will be larger than a similar one which is further away; nor that an object which is not moving actually straight at the observer will appear to take a diagonal path across the observer's field of view. From these three basic ideas, most computer games derive their three dimensionality.

There is a second form of perspective, usually referred to as **Projection or Isometric Perspective.** It is used a lot in technical drawings (see figure 2). The objects depicted are seen from above and to one side. Instead of allowing lines of similar length to diminish in height as they move away from the observer (in accordance with Vanishing Point Perspective) they are made to remain identical. Games like *3D Ant Attack* or the classic arcade game *Zaxxon* are examples of this soft of perspective. Isometric perspective can be quite realistic as long as other visual cues are provided. An important addition is that of light and shade. The brain accepts that sunlight comes from one side and affects a solid object. Look at figure 3. What you see is a hexagon (six sided shape) with three lines radiating from the centre. With little effort it can be seen as a three dimensional cube. But in figure 4 some shading has been added, and now there's no doubt you are seeing a three-dimensional cube.

Another visual cue which helps isometric perspective to work is what we might call Hidden Views. Figure 5 depicts two circles, one broken by running into the other. Because the unbroken one is bigger, we have no difficulty in accepting that the two circles are identical in size but that one is smaller because it is farther away from us, and we know therefore that it is really disappearing slightly behind the nearer one. Technically this is absurd – but it works anyway because the brain is used to interpreting visual information frm the seen world in this way. In summing up isometric perspective, we can say it is less visually effective than vanishing point perspective, but can still work perfectly well if additional visual cues are provided for the brain.

So we have a sense of depth created by perspectives which incorporate distance and size related to distance. Objects nearer to us are bigger and they eclipse objects farther away that appear smaller. Light and shade create an illusion of solidity, and when these elements are all combined convincing 3D results. But there are three other important elements to consider. Due to the thick atmosphere we live in light is refracted in such a way that distant objects appear fainter or paler. As a result the brain tends to accept that a paler or dimmer object is farther way than a brighter or more strongly defined one. The arcade game *Battlezone* uses this principle, and Steve Turner uses it in *3D Lunattack*, where distant fighters have less lit pixels in their graphics than those 'nearer' to the player. The second element is parallax movement. When you sit in a car or train, the landscape closest to you flashes by far faster than the landscape in the distance. If you look at figure 6 you can instantly see that



3D

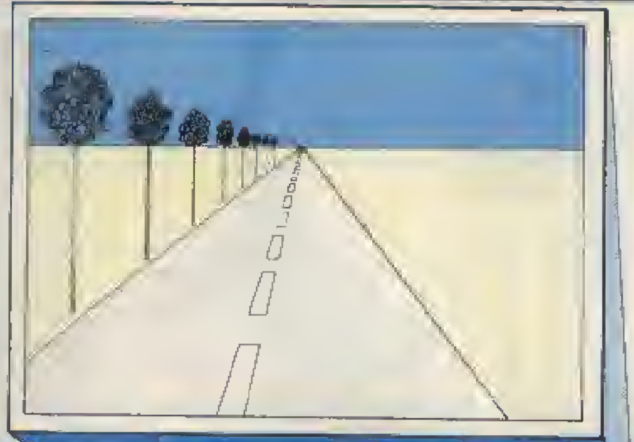


Figure 1
Parallel lines converge at the vanishing point (A) on the horizon.

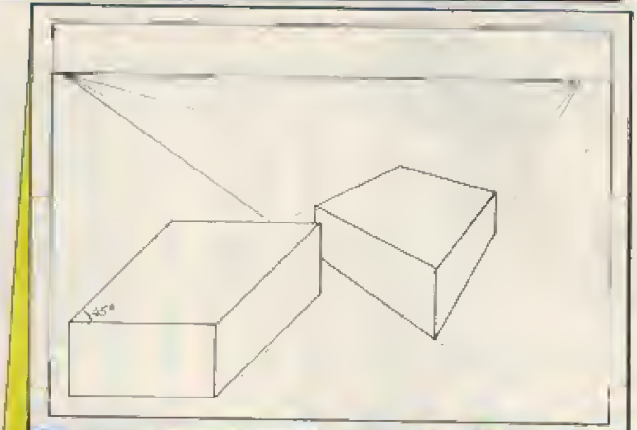
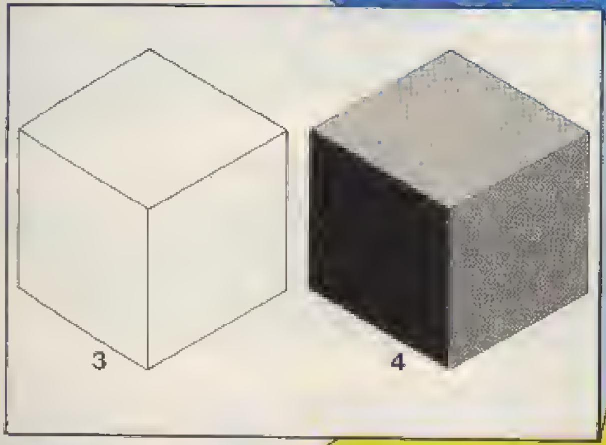


Figure 2 represents the same rectangular box but seen in two perspectives – Isometric on the left and Vanishing Point on the right.



Figures 3 and 4

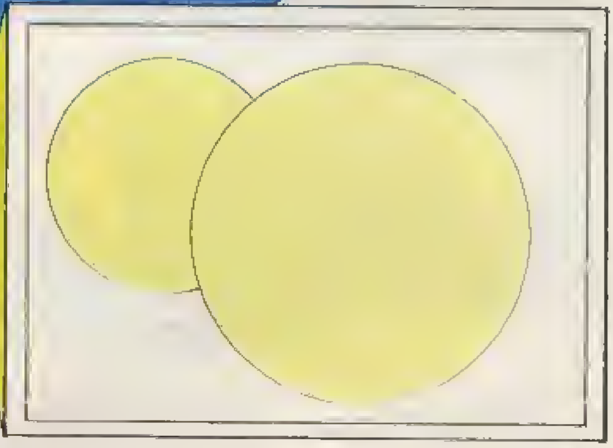
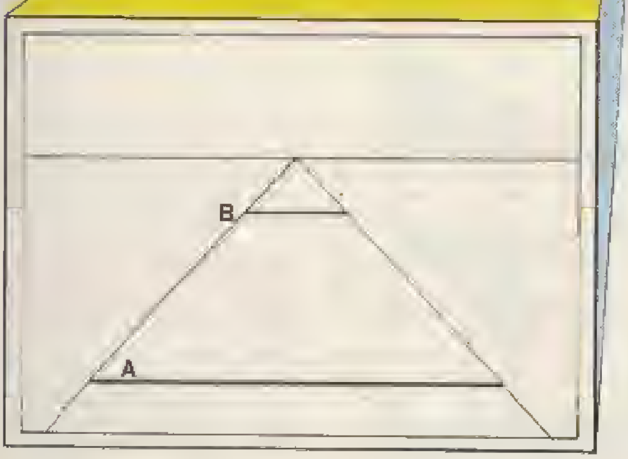


Figure 5

Figure 6



the lengths of lines **A** and **B** are different, **A** being much longer, although in reality they would be the same because the vanishing perspective lines are supposed to be parallel. It follows that objects must move faster the nearer to the observer they are to cover the same distance. The third element is focus, something which is a modern concept of distance, one brought home by the advent of the camera. The eye, of course, can focus across an enormous range of distance – the camera cannot. Today we are so used to seeing photographed images incorporating a depth of field which has near and distant objects out of focus, that we have come to accept this as another visual cue. It is this device which we have played on to produce this month's cover of CRASH. The painting was done in several layers and cut out before being photographed, as you can see in figure 7.

PUTTING IT ALL TOGETHER

The problem confronting the computer programmer is what sort of perspective to choose, and when having done that, how to implement it in the prog-

3D OR NOT... 3D

ram. Vanishing Point Perspective is an obvious choice because it is the one the eye accepts instantly. But there are serious problems.

For a start off, this will require objects to zoom out of the screen at the player, which means that each object must be defined many times over, i.e. as small and distant, big and close, and as many stages as possible in between. Obviously the more animation stages employed, the more realistically 3D the graphic will appear.. Classic examples of this are *Zzoom* (Imagine) and, better still, *Deathchase* (Micromega). Even 48K of RAM becomes insufficient if a lot of characters must be stored for each object as it grows bigger, and especially so if there are to be a lot of different objects to be moved. Compromises must be decided upon to get as much information in to handle the graphics while leaving enough space for the game commands and handling.

With Isometric Perspective the programmer's life is much easier because the scenery only has to be defined once as it doesn't change shape physically during the game. Look at *Ant Attack* (Quicksilva) and you'll see this exactly. The city is a large graphic over which the screen scrolls, so the only problem is the scrolling, , the blocks of the city don't have to be redefined with every movement. Obviously this takes up much less program space than Vanishing Point Perspective graphics. The disadvantage, however, is that the game can only be played from one height as it is only from a strictly fixed vantage point that the isometric perspective will work. With Vanishing Point Perspective the player can alter height convincingly, and even move from side to side (like *Pole Position* type games).

When all this has been sorted out, and the programmer has decided how many of the other sophisticating elements he can add to the game to increase the 3D effect, you can begin to see that Steve Turner's definition of a 3D game is pretty spot on.

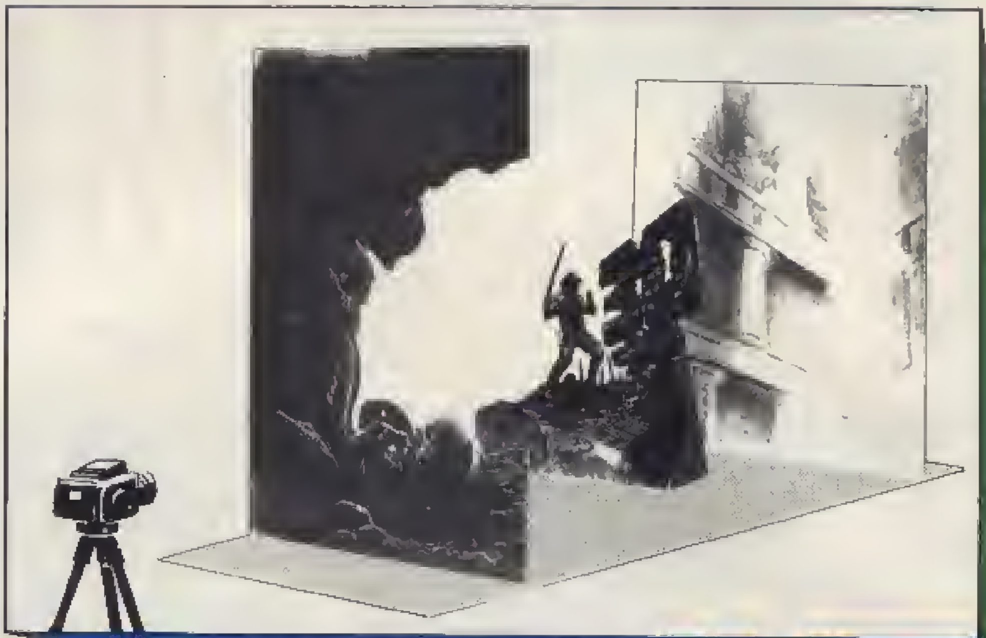


Figure 7
Creating depth by the use of focus.
This is how our cover picture was done this month.
It makes an effective three-dimensional device, but is very difficult to achieve in a computer game for the Spectrum because of the colour attribute limitations.

3D GAMES IN PERSPECTIVE

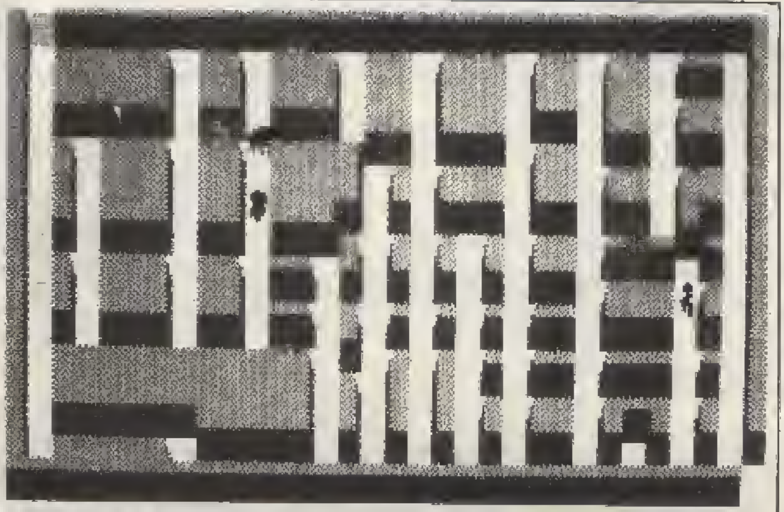
There have been a large number of games produced for the Spectrum which claim to be 3D. In part two of this article, we examine many of them closer in the light of Steve Turner's definition and see how successful they are at presenting a three dimensional image.

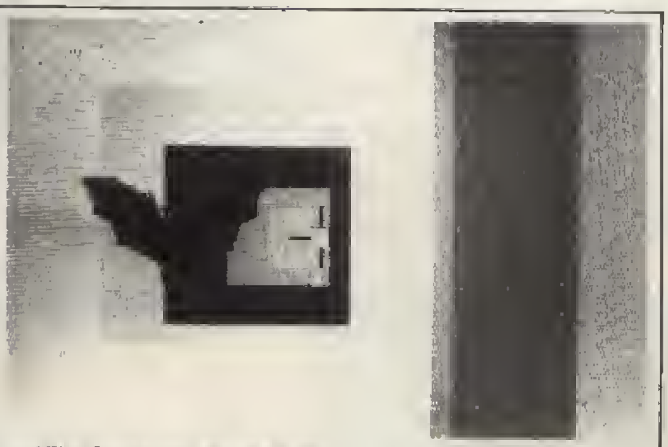
AMAZING, STAGGERING, UNBELIEVABLE,
– all words that have been used to describe home computer game graphics. But how often have you thrilled to the blurb and then wished you could have drilled the programmer with his own photon laser blaster when you got the game home and discovered how staggering it was – staggeringly bad?

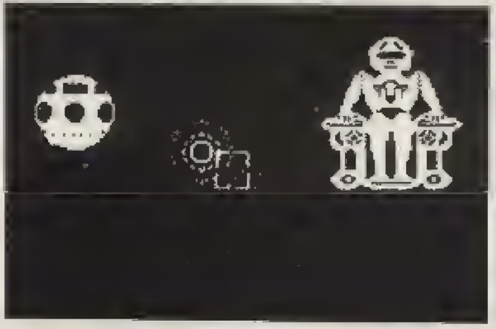
As we have seen in part one, there are really two different types of perspective in use, and these tend to define the type of game or, rather, the vantage point from which the game is played. Vanishing point perspective tends to the game where 'you' are 'in' the screen, i.e. the 'cockpit' type game. Isometric perspective tends to the game where 'you' are represented on the screen by a character, which for convenience we will refer to as a bird's eye view. There are, of course, some anomolous games which come somewhere in between or play with space in a three-dimensional way, but aren't visually 3D on the screen – as we shall see.

FROM MONSTERS TO TRASH

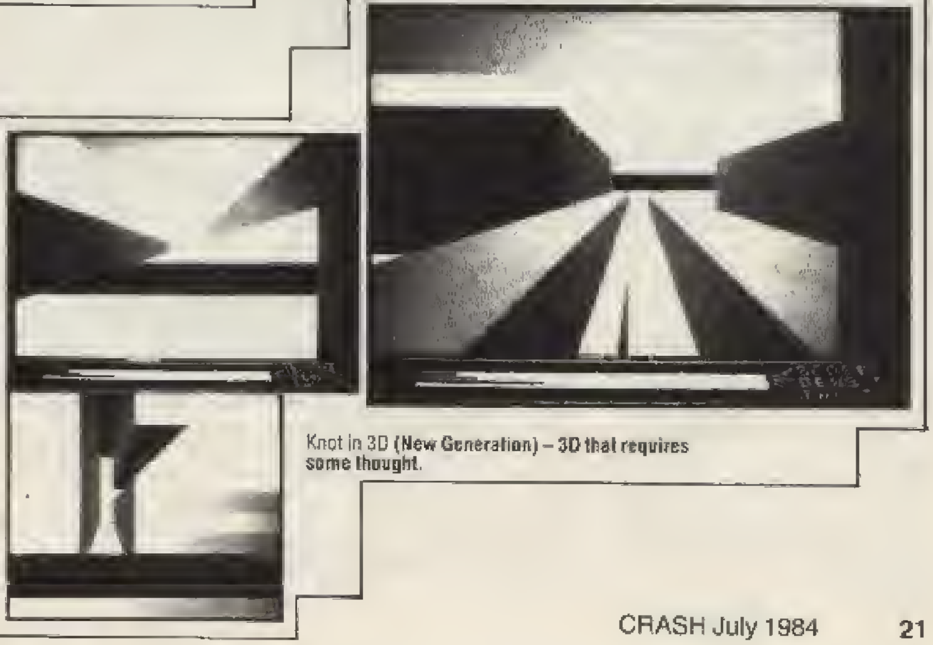
Programmers and sometimes software houses tend to concentrate on a particular type of game. **Malcolm Evans** and his New Generation Software have been one such. *Escape* was an early and striking example of 3D, striking because of the lovely colouring and 3D because of the way the maze is constructed. Malcolm has ranged across both forms of perspective. *Escape* is decidedly bird's eye view, a fixed vantage point from which your man must be guided through a series of complex mazes made of hedges. The amazing monsters which chase you through the maze are a definite hazard, but the player is confronted by the difficulty of finding the horizontal pathways which are hidden behind the height of the hedges. Visual cues are provided by shading the colour and also by the character animation – characters face in the direction of their travel. They do not change size, however, as this isometric perspective.


Escape **by Malcolm Evans (New Generation) – a striking example of isometric perspective.**


3D Tunnel **(New Generation). Malcolm Evans turns to vanishing point perspective with less satisfactory results.**


3D Vortex **– similar to 3D Tunnel – but JK Greye's game results in somewhat more realistic 3D.**

With the follow-up *3D Tunnel*, Malcolm turned to a cockpit view as you guide yourself along a twisting tunnel filled with flying objects to be shot as they come towards you. Visually *3D Tunnel* is less satisfactory. The effect is generated by alternating squares of colour set one inside another. These jerkily 'move outward' by growing bigger until they grow out of the screen. Going round a corner is done by offsetting the small start squares so that their edges touch the outer ones. The result works, but only just. Interestingly *3D Vortex* (JK Greye) tried the same thing but used spiraling pixels to better effect. It resulted in a smoother image but was spoiled by the objects, which were very jerky.


Knot in 3D **(New Generation) – 3D that requires some thought.**

3D OR NOT... 3D

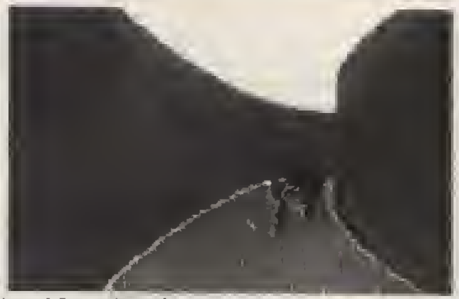
In the end both games suffer from a lack of overall definition as far as 3D goes, leaving the brain working too hard to conjure up a sense of reality.

Knot in 3D fared better, New Generation's third game and second 'cockpit view' type. *Knot* also scored because the concept required a readjustment of thinking from the player, which made it more than just a 3D game. In effect *Knot in 3D* is a three dimensional 'Light Cycles' game where the player must fill up the available space before the computer does. You control a 'light trail' and, as in the two-dimensional variety, you must avoid hitting your own trail or that of the computer, the winner being the one to make the other crash.

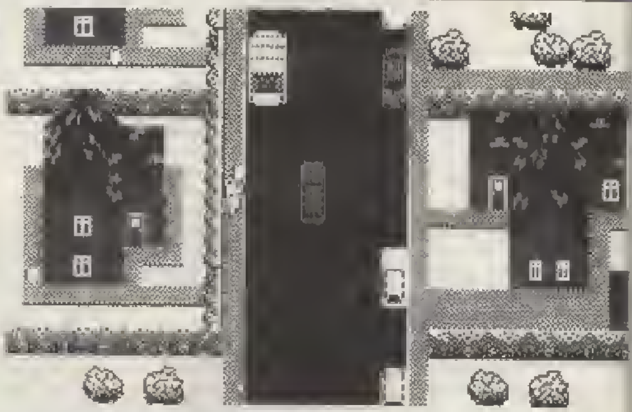
Malcolm's next offering was *Corridors of Genon*, another cockpit view game based on the classic 3D maze principle. Here, the corridors are all curved, the visual cues being wall shaped (receding with distance) and colour shading. The graphics are quite simple, although implemented well in the protagonist, Bogul, who grows bigger in stages as he approaches.

The recent *Trashman*, sees a return to the bird's eye view of isometric perspective, employing hidden views (Trashman disappears behind objects between him and you) and light and shade techniques to create an effect of solidity in the buildings and hedges. Colouring too is used to great effect.

These examples of 3D games from New Generation illustrate very well the difference between the two perspective views and also the problems the programmer faces in using them. Of these games the most sophisticated graphically are *Escape* and *Trashman* – the bird's eye views – where the defined graphics are fixed and unaltering during play. Without exception the cockpit games are simpler, creating 3D with shape and vanishing point perspective, but unable to do it perfectly because of the limitations of memory and the complexity of the calculations required to move objects realistically through space towards the player.



Corridors of Genon **(New Generation) is a classic maze game which uses shape and tonal colouring to achieve 3D.**



Trashman **(New Generation), and Malcolm Evans returns to isometric perspective with a vengeance.**

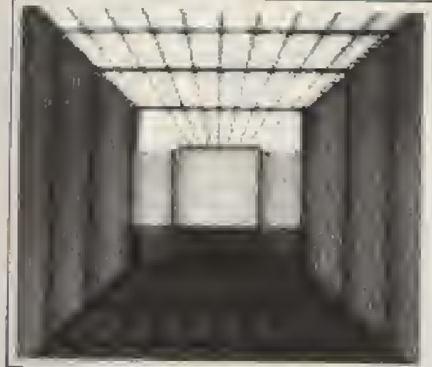
FROM MAZE TO SPACE

If the cockpit view places problems in the programmers' paths, they have nevertheless been elegantly overcome in a number of games. a 3D maze necessarily requires walls drawn in perspective in order to work. But once the shape has been worked out, it can be repeated endlessly without eating up much more program. A number of maze games have contented themselves with very simple views in which each step leaps into view so that the perspective may work, but the effect of moving between walls does not.

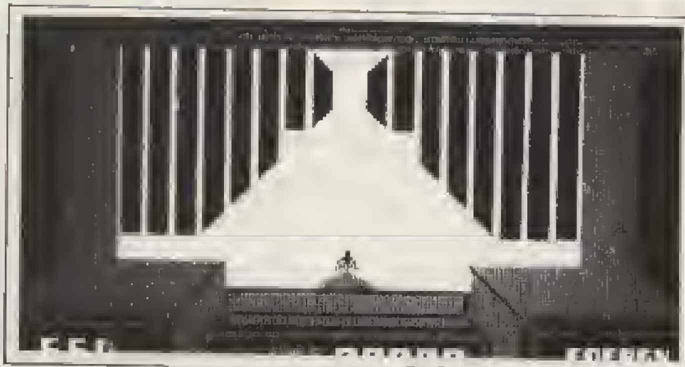
Omitting the ubiquitous '3D' from the titles, we have *Monster Chase* (Romik), *Maze of Gold* (Gilsoft), *Maze* (Impact) among the earlier Spectrum offerings, and the more recent *Quetzalcoatl* (Virgin), *The Skull* (Games Machine) and *Bat Attack* (Cheetah Soft). *Monster Chase*, *Quetzalcoatl* and *The Skull* all have monsters in them – not unlike Bogul in *Corridors of Genon* – but *The Skull* uses its monsters best of all, with the skulking skulls sliding into corridors from behind walls when you least expect them.

All these 3D maze games suffer from the above-mentioned lack of smooth movement although *Quetz* and *The Skull* do have a larger number of steps to create a reasonable sensation of forward movement. The one game which outshines them all in this respect is *Zig-Zag* (DK Tronics) which has employed a very clever device to create the 3D illusion. Here, vertical black stripes make up the walls, with accurately shaped floors and ceilings cutting into them. This very simple graphic device recreates perspective extremely well, allows continuous forward movement **AND** allows the player to 'turn his head' when going round corners. Its supreme advantage is in the economy of memory used to create the effects. The monsters being chased in the game also obey the laws of perspective by growing smaller as they run away and being progressively hidden by intervening objects like projecting walls.

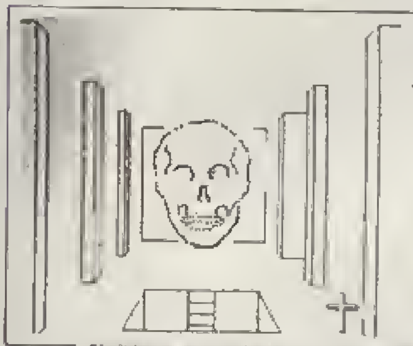
If you are suffering with a problem in describing a three dimensional space enclosed by walls, why not turn to an easier medium – space? In space there are no walls to hear the programmer scream, and a sense of depth can be created by having objects merely change size as they approach or move away. The result of this understanding has been a number of excellent and not so excellent games of space shoot 'em up. Among the earliest offerings **John Hollis's** *Timegate* (Quicksilva) has become a classic, if a little confusing when it comes to the scoring! 3D here is a relatively simple visual matter. There are no peripheral objects to be moved in perspective as there would be on the ground, only the alien ships have to be coped with. *3D Spawn of Evil* (DK Tronics) was a very similar game which suffered from space ship uncontrollability; although it isn't directly related to three dimensionality, heavy objects are affected by inertia, they can't just go from zero speed to flat out without accelerating or slowing down – both above-



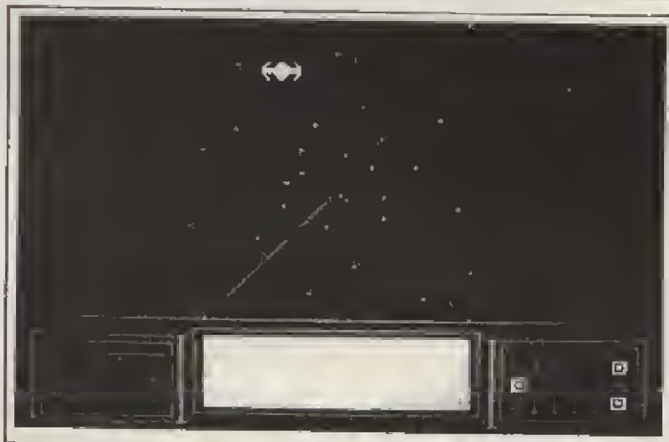
A simple looking 3D effect using strong lines – Quetzalcoatl.



Zig-Zag (DK Tronics) uses a simple and clever device of vertical stripes which can economically be deleted or reinstated to create the planes of a maze.



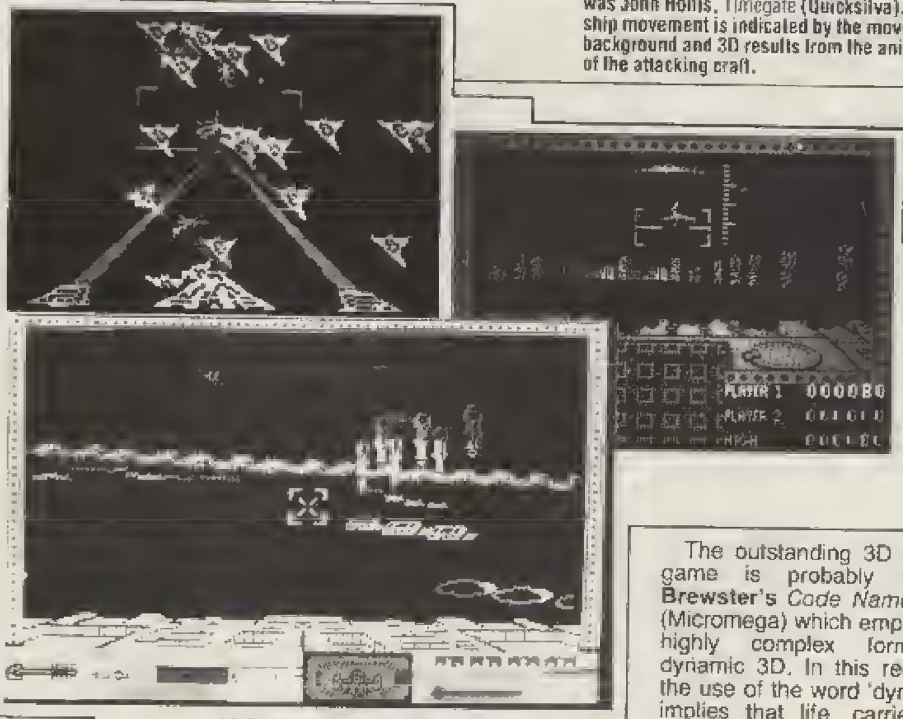
Skulking monster skulls in The Skull (Games Machine) demonstrate an effective use of the hidden view ina 3D maze game.



One of the earliest 3D shoot 'em ups in space was John Hollis, Timegate (Quicksilva). Space ship movement is indicated by the moving star background and 3D results from the animation of the attacking craft.

mentioned games incorporated this effect into the space craft, sometimes making lining up a shot near to impossible. It can be a nice and realistic touch though.

Other games which quickly followed suit were *Galaxy Attack* (Sunshine Books), *Space Wars*, *Seiddab Attack* and *Lunattack* (all by Hewson) and *Space Station Zebra* (Beyond). The 3D Seiddab trilogy (Hewson) written by Steve Turner makes another example of a programmer working his ideas out gradually through a series of games. Unlike Malcolm Evans of New Generation, Steve Turner has concentrated on the cockpit view exclusively, each game getting better and more complex until the recent *3D Lunattack*, where a sense of flying through a three dimensional space is about as perfect as a small home computer can allow and leave room for a playable game. This concentration on vanishing point perspective is about to change with Steve's new game, a 3D adventure which employs a unique mixture of vanishing point and fixed vantage (almost) isometric perspective.



3D Space Wars, 3D Seiddab Attack and 3D Lunattack (Hewson) all written by Steve Turner show a concentrated development of moving 3D from the cockpit view.

The outstanding 3D space game is probably **Derek Brewster's** *Code Name Mat* (Micromega) which employs a highly complex form of dynamic 3D. In this respect, the use of the word 'dynamic' implies that life carries on even if the player can't see it – in other words, just because an alien space ship has zoomed off the edge of the screen, it

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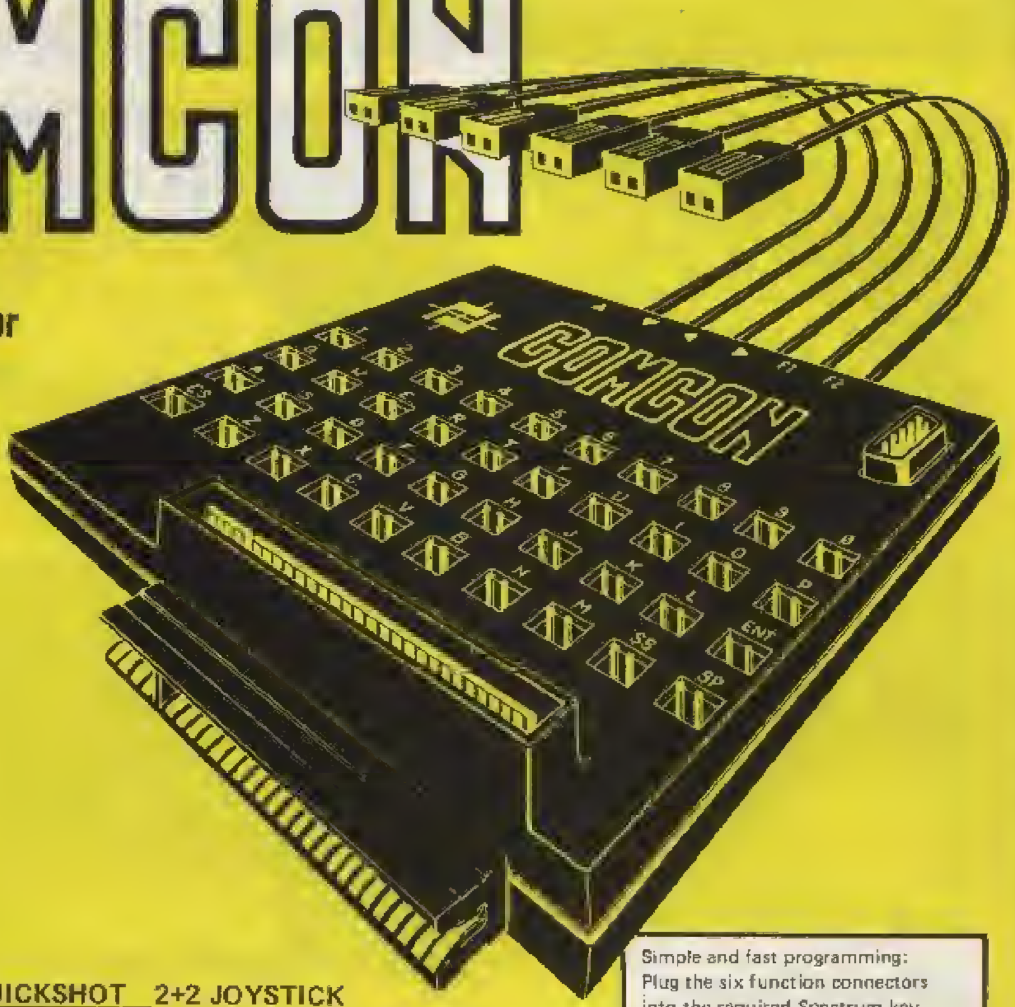

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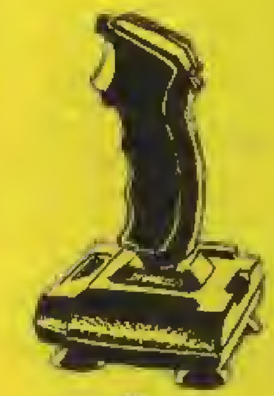

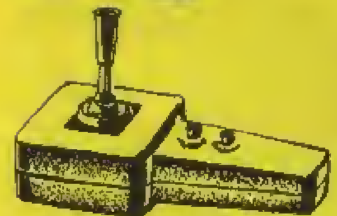

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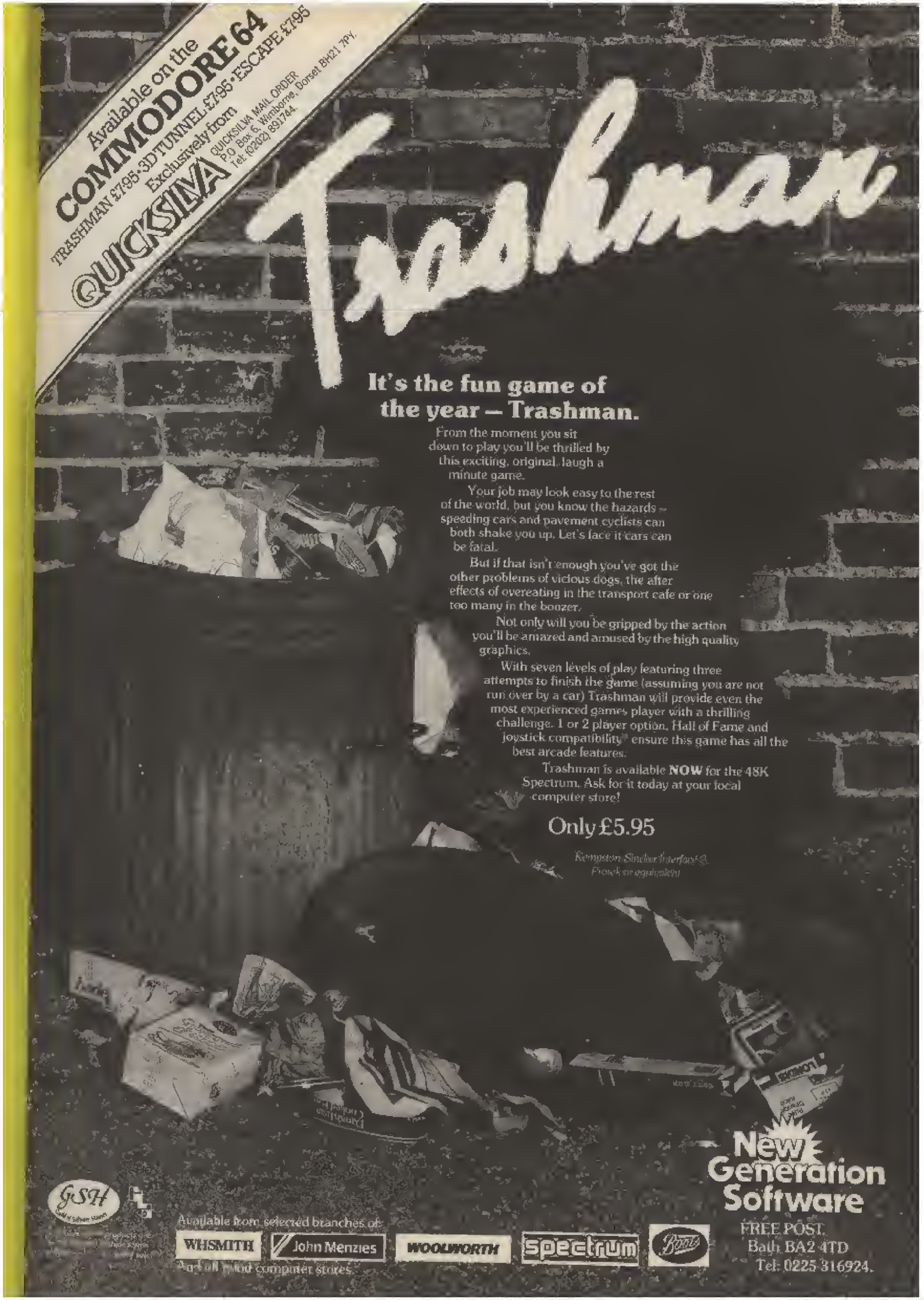

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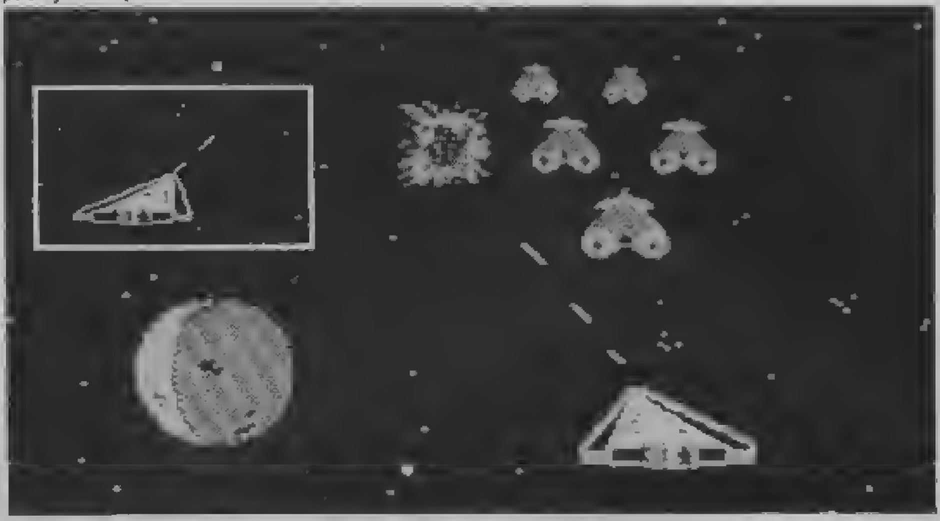


Ad Astra (Gargoyle) combines many perspective elements very successfully. Here we can see the effect of vanishing point perspective on the shape of 'your' ship.

doesn't mean the computer has forgotten it – it may be lining up a shot on you or circling back. This is true of *Code Name Mat* and *3D Lunattack*. The effect of craft flying towards and past you in *CNM* is marvellous, but additionally 3D is used in another way when navigating with the 'distant view' facility which requires an adjustment of the thinking process (not unlike *Knot in 3D*) in order to see it working.

One final point before leaving space 3D cockpit games – as objects approach they get bigger **BUT** they should also get more detailed. Again, it's a problem of constantly redefining the graphic as it moves, and some of the games mentioned here do it better than others.

EXTRA VEHICULAR ACTIVITY

Staying in space, but getting out of the cockpit, we get the combination of space shoot 'em up with vanishing point graphics but where the player seems to hover outside the picture. This has been a relatively recent development and the games that instantly spring to mind are *Blade Alley* (PSS), *Orpheus* (CRL) and *Deathstar* (Rabbit). *Blade Alley* uses some of the maze game techniques with reasonable success as far as a three dimensional quality goes. Alternating colours flash outward along fixed baffles of increasing size and height to create the perspectivised trench-like effect of these games. *Deathstar* is very similar but relies more heavily on the strong perspective lines of its trench. Oddly, Rabbit's game has chosen to break the perspective parallax rule. It has a series of dotted lines moving from the vanishing point outwards toward the player along the walls and floor of the trench. Perspective demands that these should start slowly and increase in speed as they approach the player but the reverse happens – in *Deathstar* poor programming or poor thinking. It spoils the effect of the perspective. *Orpheus* relies on a single drawn line radiating outward from its vanishing point to create the effect of flying down a long cavern. It's a primitive and ineffectual device which isn't helped by the jerky advance of the alien objects to be shot. In *Blade Alley* this aspect works very well with several stages of animation being employed to create depth and movement.

Graphically, one of the best games of this type is *Ad Astra* (Gargoyle Games). The animation of the alien craft is pretty standard to the type with fewer animation stages to create forward movement than in *Blade Alley*, but the real miracle happens with the rolling asteroids. These display all the classic rules, change of size and apparent speed, correct perspective movement, increase of observable detail as they approach (the craters on the surface are even animated to rotate as the planetoid rolls on its axis), hidden view as one obscures another object, and finally shading which is very well done. And in common with *Blade Alley* and *Deathstar*, the perspective drawing of your ship is distorted as it moves from side to side or alters height on the screen. All of this calls for a lot of program to redefine the graphics. *Ad Astra* does it very fast and smoothly.

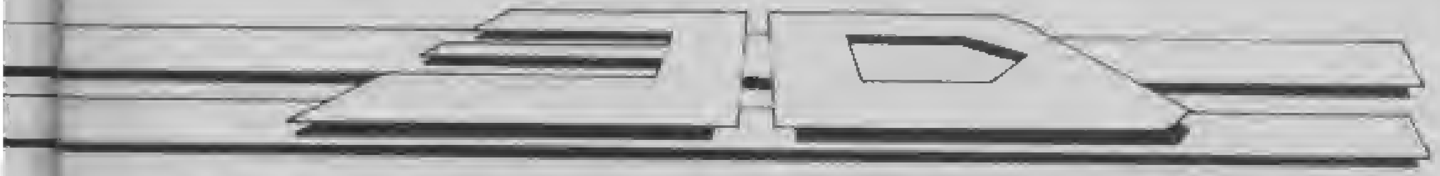
VECTOR MOVEMENT

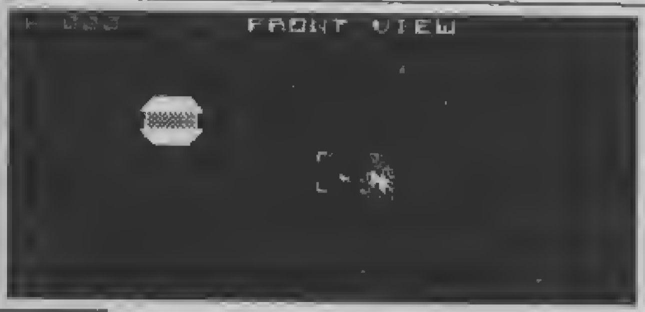
As Spectrum programming has become more sophisticated so has vector movement improved. This is a method by which the position of a point in space may be determined relative to another and constantly monitored so as to give a consistent perspective result. It applies very much to 3D games of course. Programmers tend to ahve their own particular methods for vector movement.

The method is nowhere more acutely needed than in wire frame 3D or 'hollow' 3D. Games using this device are generally based on the arcade classic *Battlezone*. CRL had an early game which approximated the type – *3D Desert Patrol*, but it was eclipsed by the appearance of *3D Combat Zone* (Artic). Here we have a much more mathematically accurate representation of vanishing point perspective, one which allows that the vanishing point is not a sole dot on the horizon, but actually all the visible horizon. This means that the objects can be defined continuously to provide a highly realistic outline of their shape which is always altering depending on how it moves, or how the player 'moves' in relationship to the object. What it lacks is a solid feel, since the objects are all made up of lines. The eye can often be confused as to what is the front and what is the back of the object. But the advantage to the programmer is that he only has to define the shape of the objects initially, and after that the vector part of the program will take care of the movement and the compression caused by perspective. In lacking solidity, the games lack light and shade and hidden view – in being effectively transparent, several shapes can intermingle with each other. Nevertheless a very large and dynamic playing arena can be created with a genuine sense of movement and three dimensionality.

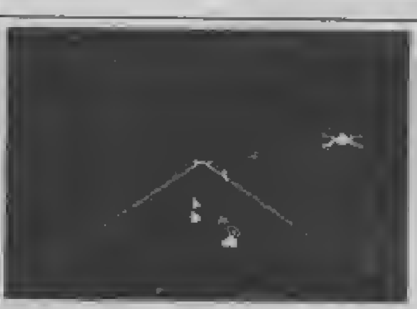
Artic went on to use the same system in their *Dimension Destructors*, except that this was set in space and so lacked the feeling of a landscape – to its detriment. Months later the tank battle was fought again in *Rommel's Revenge* (Crystal). Crystal provided a background mountainscape which *Combat Zone* lacked, adding to the sense of space, but emphasising the one essential compromise in this type of game – the fact that you can never reach the limits of the playing area; as you approach the mountains, so they seem to recede before you – a symbol for life perhaps?

A very young company called **Real time** have now pro-

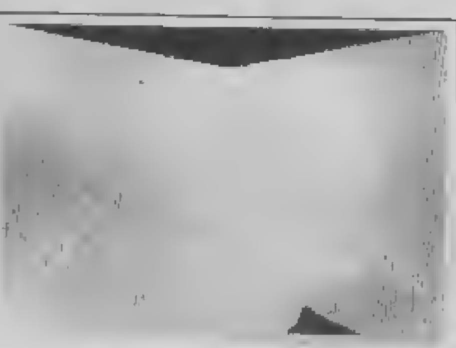




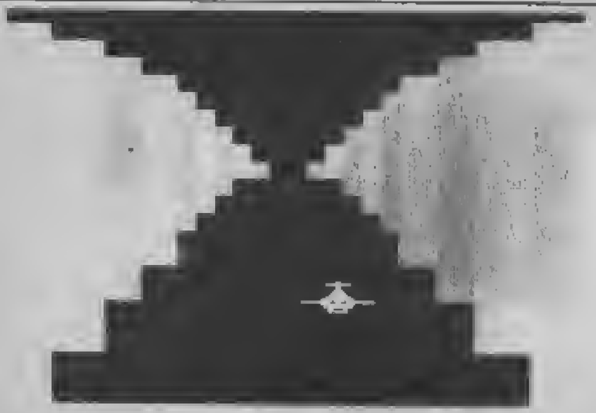
Derek Brewster's Code Name Mat **(Micromega) is probably the most sophisticated space 3D game yet.**



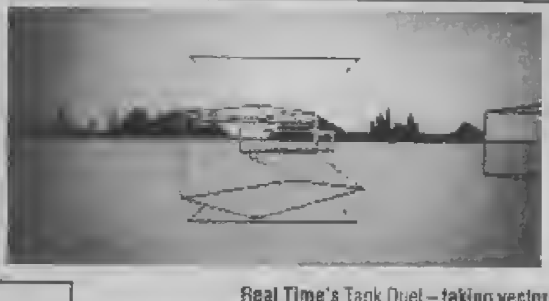
Orpheus **(CRL) fails the 3D test by retreating too far from any conventions for it to work.**



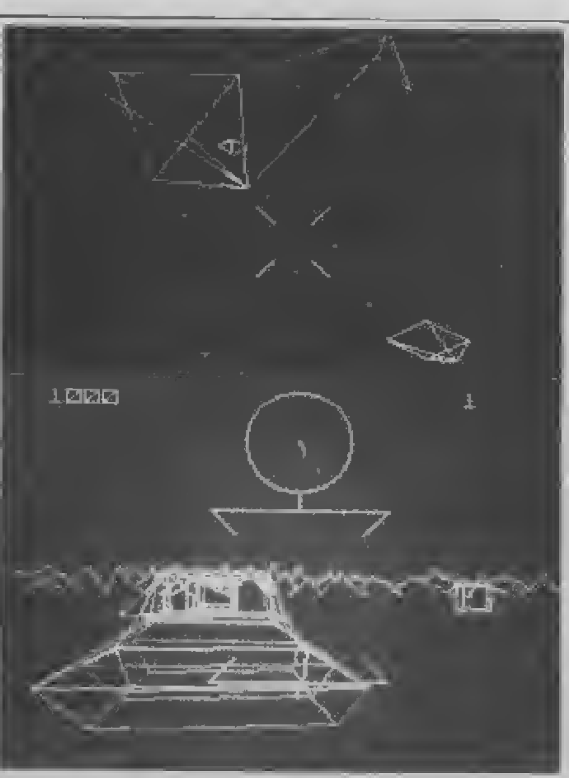
Deathstar **(Rabbit) is less successful than Blade Alley, contenting itself with simple shapes to define the depth.**



Blade Alley **(PSS) uses a simple device to create depth and combines it by defining space with the ship's shadow and animated attackers in 3D.**



Real Time's Tank Duel **– taking vector movement to a solid base for a better effect.**

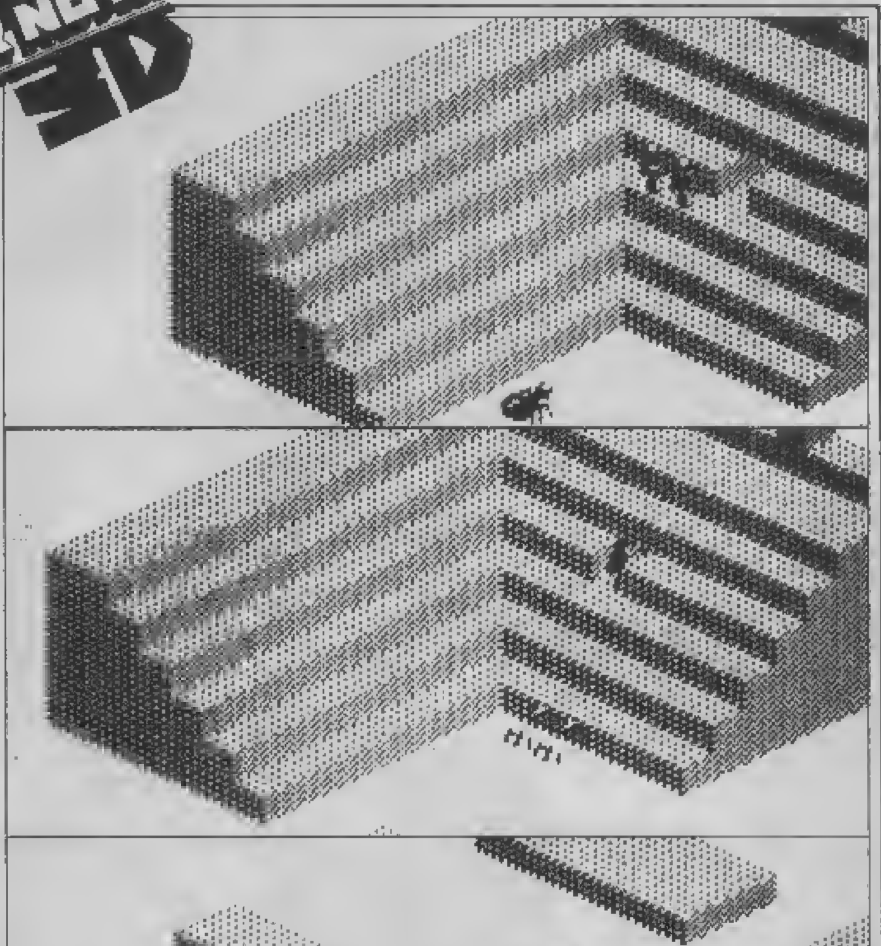


Dimension Destructors
(Artic) vie with Rommel's Revenge **(Crystal) in the vector movement stakes – a very precise and mathematical approach to perspective.**

duced a version called *Tank Duel*, which employs the same hollow 3D graphics but in much greater profusion than either *Combat Zone* or *Rommel's Revenge* and has added solid colouring to the plain and to the background landscape, increasing the sense of depth and space. It works very well indeed.

Vector movement is important to almost any 3D game of course, for plotting positions of objects relative to each other. But there are many games which have avoided its complications, and many which are successful because they employ the range of visual cues for the eye to fasten on.

3D OR NOT... 3D



The remarkable graphics of 3D Ant Attack (Quicksilva) by Sandy White. A classic example of isometric perspective, shading and hidden views. In this game even the characters are properly represented in the perspective effect.

ZAXXANT ATTACK

Shortly before Christmas Quicksilva astonished us with **Sandy White**'s remarkable *Soft Solid 3D Ant Attack*. This Scottish programmer had managed to combine 3D effects which took account of architectural solid objects as well as soft human shapes. *Ant Attack* is the classic example of bird's eye view perspective for the Spectrum as *Zaxxon* is for the dedicated arcade machine.

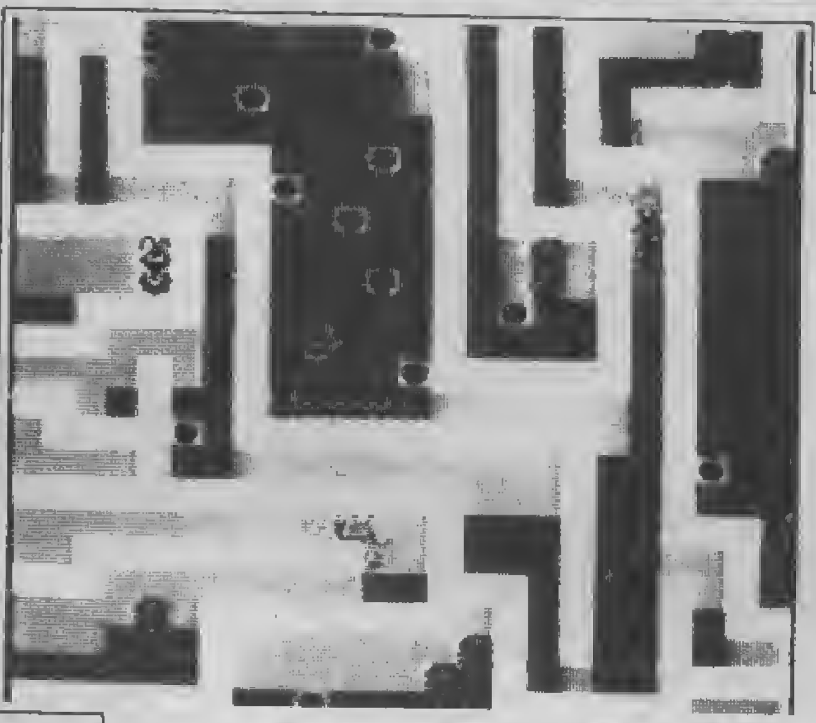
Ant Attack uses a fixed isometric perspective over a large area which is then merely scrolled as the player moves his character about the area. To help the sense of solidity, the 'buildings, are all accurately shaded and additionally the 'live' characters disappear behind them when required. The usual disadvantage of a bird's eye view, that it is fixed, has been aleviated in this game by allowing four fixed positions at each compass point. However, the game also illustrates the main problem of the perspective, that you can't get down into it, since this would mean redefining the main graphics, and an increase in height would show up the problem that exists with the false or non-existent horizon – it would 'sink' with the foreground and look silly.

In looking at *Zaxxan* (Starzone), the Spectrum version of the famous arcade game, one is reminded of those television shots which use a telephoto lens. The foreshortening effect of the long lens makes distant objects actually as big or even bigger than the nearer ones. *Zaxxan*'s 3D lets your space ship to move sideways (in effect, diagonally away from you) for a considerable distance without appearing to hit the wall which is directly behind it. Even though it isn't visually apparent, a distinct space has been artificially created. The main visual cue here is the shadow on the ground, a common theme with *Blade Alley* and *Deathstar*. But because of the isometric perspective, the further reaches of the trench are the same size as the nearer. In the main, this does not disturb the player much, and the additions of shading and hidden view add to the 3D effectiveness.

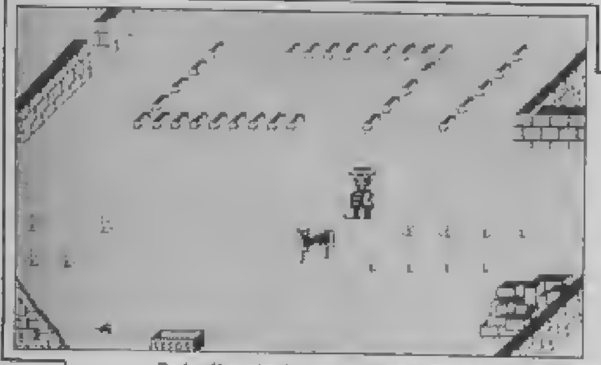
Recent additions to the bird's eye perspective are *Android 2* (Vortex), *Pedro*

(Imagine) and *Haunted Hedges* (Micromega). Of these three *Android 2* and *Haunted Hedges* are a variation on the theme of Malcolm Evans' *Escape*, mazes where horizontal pathways are hidden behind the height of the hedges or maze walls. *Haunted Hedges* was **Derek Brewster**'s first incursion into isometric perspective and the result (a 3D Pacman type game) is less satisfactory than the complexities of his later *Code Name Mat*. Here, the 3D is really only a visual gimmick which has little to add to the playing of what is a fairly straightforward ghost gobbler. *Android 2* is another matter, a complex game of various stages in which the 3D graphics add greatly to the visual excitement and playing difficulty. Mines hidden behind walls can be fatal!

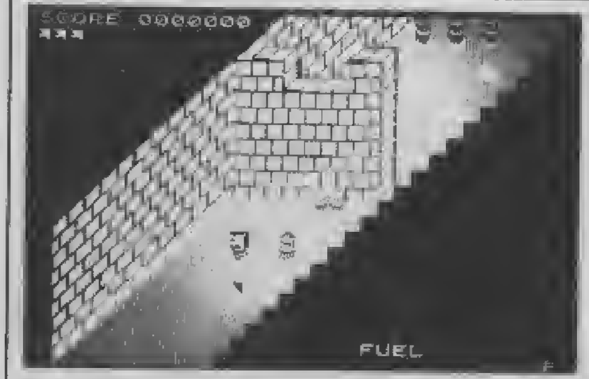
Pedro is slightly different in that the perspective is not used to hide things – another case of 3D for its own sake, as it adds little to playing the game and indeed makes controlling the man awkward and frustrating.

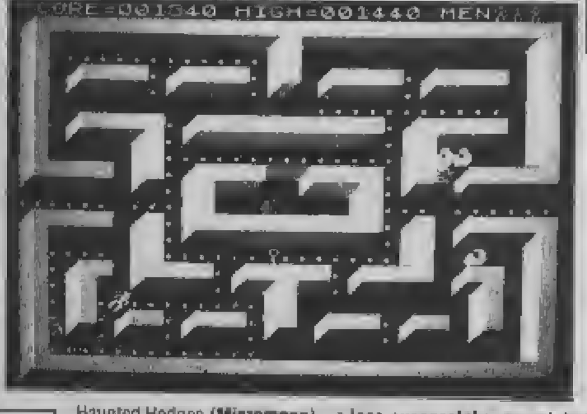


Android 2 (**Vortex**) by **Costa Panayi** – **a game where the 3D is an integral part of the playing.**



Pedro (Imagine) – perspective without point. None of the characters is affected by the perspective (isometric).





Haunted Hedges (**Micromega**) – **a less successful approach to the problems of 3D by Derek Brewster. The effect works, but doesn't add much to the game.**

TO THE VANISHING POINT

Imagine fared much better with perspective in their best-selling game *Zzoom*. If *Zaxxon* is a 3D Scramble type game, then so is *Zzoom*, and a number of other similar programs. The difference between *Zaxxon* and *Zzoom* is that the former is a bird's eye view, whereas the latter is a cockpit view. The effect of travelling low over a road towards the ever-receding horizon works quite well with correct visual cues contained in the perspective lines and the increasing size of approaching enemy craft. The effect is entirely spoiled by the outsize refugees marching along on the horizon and whereas the player can accept the horizon never getting any nearer (it doesn't in real life after all) it is harder to accept that you never get any nearer the refugees. This is a good example of a programming compromise which is almost unavoidable in the circumstances. It doesn't however actually spoil playing the game.

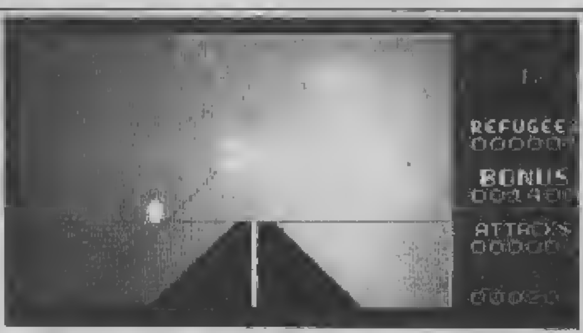
The other games which have something in common with *Zzoom* are the road racer games based on the famous *Pole Position* arcade favourite, and flight simulation games. An interesting early Spectrum attempt at a 3D road racer game is *Turbo Driver* (Boss UK). Here the 3D effect barely exists – it's almost a Cubist perspective. The cars are seen from well above although they are drawn with a slight foreshortening, and the road is described by two lines set wider at the base of the screen and narrower at the top. This pays lip service to a sense of depth but the game makes no real attempt to be 3D.

After a long gap a rash of road racers appeared. First was *Grand Prix Driver* (Britannia), closely followed by *Road Racer* (Thorn EMI) and *Speed Duel* (DK Tronics). The most convincing was *Chequered Flag* (Psion). Britannia opted for a very low view point and hollow 3D graphics with a moving background landscape. The 3D is effective, only the playability of the game suffers from elements which have little to do with the 3D. *Road Racer* and *Speed Duel* are played from a higher position, almost a bird's eye view in fact. The road racer games have this in common, that they use the vanishing point perspective very effectively, creating a fine sense of speeding along a winding road, and yet they are played not as a cockpit view. The exceptions are *Chequered Flag* (which places you more in the driver's seat) and the excellent *3D Deathchase* (Micromega). *Chequered Flag*'s driver height playing position makes the sense of objects sweeping past you much more effective than is the case with *Speed Duel* or *Road Racer*. But for sheer thrills *Deathchase* has to be the winner. Here, perspective almost is the game. The movement of the tree trunks from horizon to collision or near miss is exceptional. The game is full of neat touches like the exploding bikes, the disintegrating chunks of which you sail through as you dash on. Since your bike is very manoeuverable, the programming required to cause the trees to weave about in accurate perspective is complicated and beautifully implemented.

Flight simulation games may appear to have more in common with 3D space games, but for the fact that the 3D view has to relate to fixed points on the ground. The first was Psion's *Flight Simulation*. *Nightflite* (Hewson) followed soon after and was later improved as *Nightflite 2*. These games require a very accurate and mathematical use of vanishing point perspective in order to convince – back to the vector movement programming. A runway must be constructed to work as a proper perspective from any angle of approach and at any height. The least touch of isometric perspective and the illusion is ruined. Naturally, with so much vectoring to be done as well as program command handling, it isn't surprising that flight simulations tend to be somewhat undetailed when it comes to the ground. *Flight Simulation* gets round the problem by only providing features like lakes and the runways. *Nightflight's* elegant solution is contained in the title – pinpricks of lights on the ground describe the view and create a quite effective sense of flying over villages and towns at night.

The most exciting and busy simulation was *Fighter Pilot* (Digital Integration). This game provides a similarly undetailed landscape as that in *Flight Simulation*, but adds extremes of speed and the chance to attack enemy fighters in aerial combat. The fighters are seen in full 3D and react quite properly in the three dimensional space in which they are placed. This effect was even better used in their follow-up *Night Gunner*, where the aerial dog fights manage to look like old World War II newsreel shots.

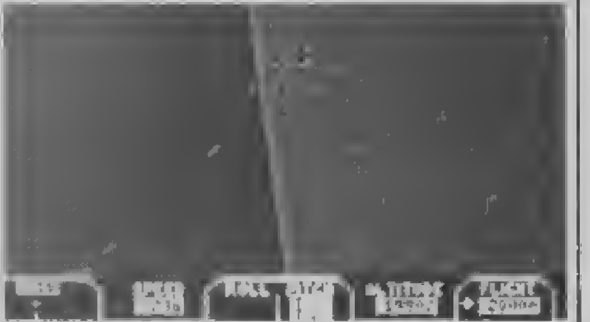
Still on the flying theme, *Heathrow ATC* (Hewson) and *Airliner* (Protek) can also claim to be 3D, but in a different way to the other games. Here the player must think three dimensionally although the screen display is not 3D. *Airliner* does have a 3D view of the runway on approach however. The computer is playing around in 3D conceptually and the player must also think similarly – it's a sort of thinking man's 3D. Arguably the games are not visually 3D in the accepted sense though.



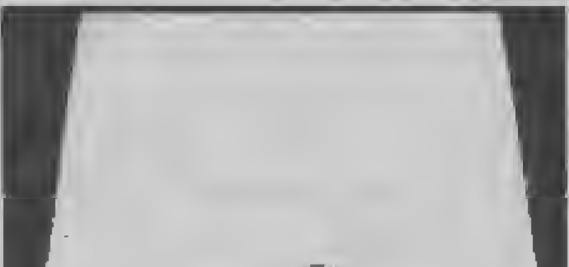
An amusing programming compromise between reality and playability is Imagine's Zzoom.

NIGHTFLITE-2

Vector movement near the ground – Flight Simulation (Psion) and Nightflite 2 (Hewson).

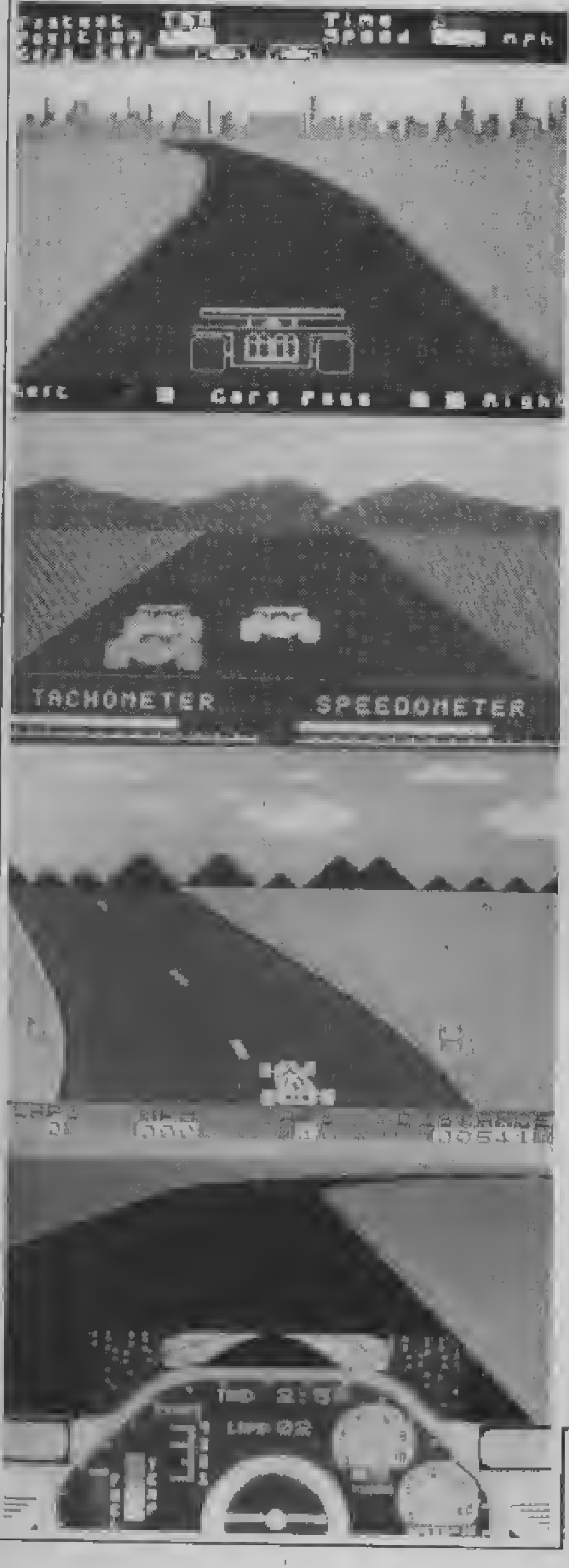


Fighter Pilot (Digital Integration) combines speed and 3D breathtakingly.

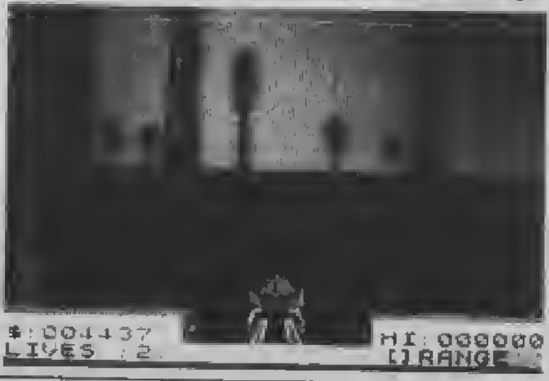


Turbo Driver (Boss UK) – an early attempt to suggest 3D in a road racing game.

Rather more sophisticated 3D effects in Grand Prix Driver (**Britannia**), Road Racer (**Thorn EMI**), Speed Duel (**DK Tronics**) and Chequered Flag (**Psion**).



The outstanding cockpit view road racer – 3D Deathchase (**Micromega**) by **Mervyn Estcourt**. A game where the perspective is the game.



BETWIXT & BETWEEN

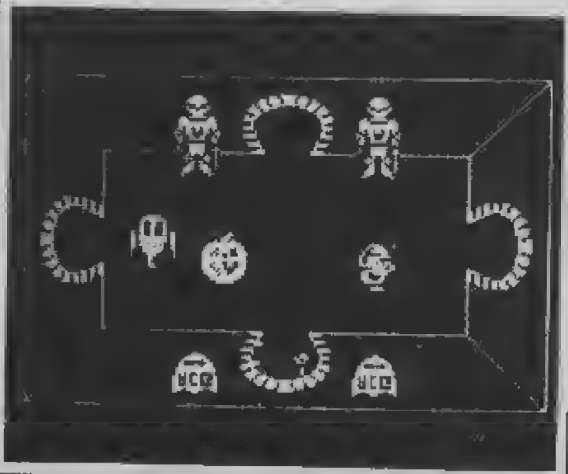
There are a few other games which use 3D in odd ways. *Atic Atac* (Ultimate) is interesting. The rooms are described in a form of bird's eye perspective which allows all four walls to be in view, the vanishing point being straight through the floor. But this is **not** isometric perspective despite the bird's eye view. Apart from this cue, the rest of the game is quite two dimensional with the objects and characters seen flat on – Picasso would probably have approved of the mixture of perspectives!

Moonbuggy (Anirog) could hardly be described as 3D, yet it employs the visual cue of parallax movement, with the foreground moving much faster than the background mountains. If this device had been used with several 'layers' of landscape it would have given a convincing illusion of depth.

Psytron (Beyond) uses 3D in an oddly classical way – the colour is quite flat but over it is drawn a landscape in strong perspective. Enemy craft are animated in 3D, growing bigger as they approach, but hidden views are not employed. Shading is incorporated into the drawings of the base, and the overall result is curiously like that of a good-quality comic.

Luna Crabs (Micromega) is an earlier attempt at 3D by author of *3D Deathchase*, **Mervyn Estcourt**. The 3D in this game is used from two other games which rely for the effect of trajectory to create depth are the early *3D Tanx* (DK Tronics) and *Terror Daktils* (Melbourne House). The shells fired in *3D Tanx* diminish in size as they fly towards the distant tanks on the bridge and the result works very well. The game's skill lies in estimating the angle of fire to reach the four lanes of tanks on the

Atic Atac (Ultimate) – mixed perspectives and barely 3D.



3D OR NOT... 3D

bridge. The tanks, however, appear unaffected by perspective – a convenience which saves having four different graphics to describe tanks in the foreground, mid and background lanes. This is perspective in bits and pieces!

Terror Daktils employs the same effect with trajectory and diminishing size of shell as it flies towards the massed beasts. But this game additionally boasts rather excellent line drawn monsters which fly out at you, getting bigger as they approach and swoop down. Both these games use 3D as an important aspect of playing but still represent a less sophisticated level of 3D development than we have seen recently.

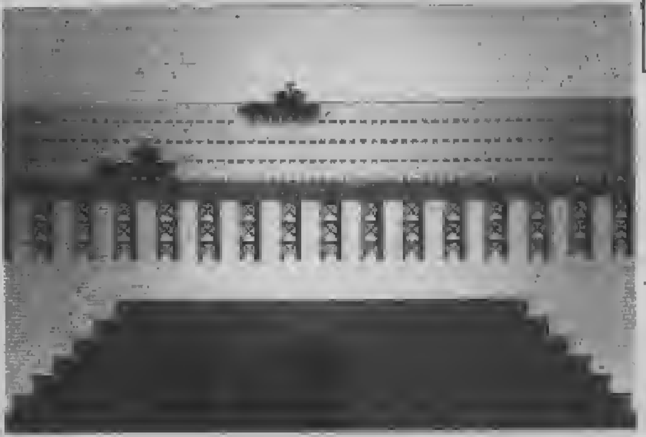
Finally, there is *3 Deep Space* (Postern) – the first 'real' 3D game. But is it real? It works on the stereoscopic system whereby two images are provided on screen, slightly separated (like a double exposure) and in opposing colours. The player wears spectacles with one green lens and one red. Each eye then sees one of the separated images and the brain interprets the two differing images as one and so thinks there is depth to the scene. It can work very effectively. Here, we are back to the theory of vanishing point perspective – parallel lines converging at a point on the horizon. The closer together the separated images are, the farther away the object seems to be from the viewer.

That's the theory – in practice *3 Deep Space* doesn't work, probably due to the Spectrum's limited colour attribution which makes it hard to get just the right amount of separation between the images. The result is that the player is forced to 'work' very hard to get even an unsatisfactory effect of 3D. So stereoscopic 3D would appear to be a cul-de-sac for the moment – more of a gimmick than a device.

But with games like *Ant Attack*, *Code Name Mat*, *Deathchase* and *Fighter Pilot*, we can safely say that the prefix 3D to a game is no longer the gimmick it used to be, and further, that the use of 3D in all these games is an integral part of their excitement and challenge. 3D games have come a long way from the paltry addition of a bit of shadow to the edges of a maze. But in the words of Steve Turner – we haven't seen anything yet! He is now looking towards a generation of games where the animated and 3D graphics will be as good as those seen on the loading screens we have become so used to. ●

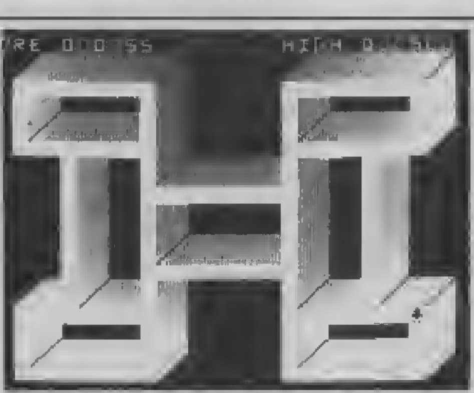
Report compiled by the CRASH team – useful arcade info by Lloyd Mangram and snotty-nosed technical stuff by Roger Kean, and thanks to Steve Turner.

Trajectory in both directions and a fixed vantage point create depth in Luna Crabs.

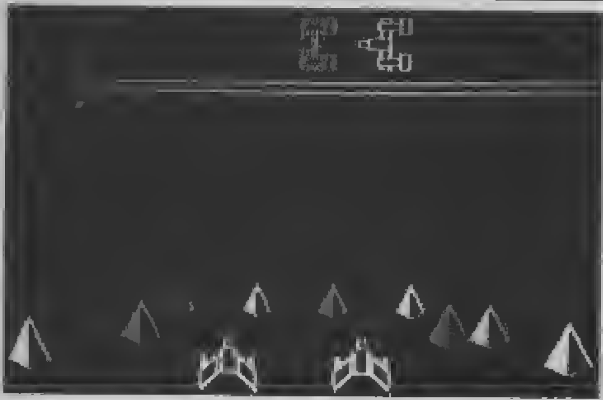


3D in bits – DK Tronics' 3D Tanx.

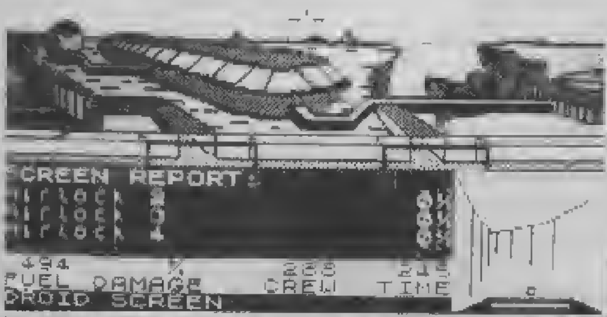
Trajectory and animated 3D in Terror Daktils.



Not really 3D, 3D Painter **(C.D.S.) just added some shading to a 2D game.**



Double vision to create an illusion on depth in 3 Deep Space.



Classic perspective drawing overlaid on colour gives Psytron the quality of a well-designed comic strip.

CHECKLIST

The list of 3D games below is comprehensive in the sense that we have tried to include all the major games that are, resemble or use 3D. If we have left anyone out, then we're sorry! Readers may well think of some we have forgotten. Please note: the prefix 3D has been omitted.

ISOMETRIC PERSPECTIVE

Android 2 Vortex
Ant Attack Quicksilva
Escape New Generation
Pedro Imagine
Trashman New Generation
Zaxxon Starzone

GAMES USING VANISHING POINT PERSPECTIVE

ad Astra Gargoyle
Black Planet Phipps Associated
Bat Attack Cheetah Soft
Blade Alley P.S.S.
Chequered Flag Psion
Code Name Mat Micromega
Combat Zone Artic
Corridors of Genon New Generation
Deathchase Micromega
Death Star Rabbit
Dimension Destructors Artic
Fighter Pilot Digital Integration
Flight Simulation Psion
Galaxy Attack Sunshine Books
Grand Prix Driver Britannia
Knot in 3D New Generation
Luna Crabs Micromega
Lunattack Hewson Consultants
Maze Impact
Maze of Gold Gilsoft
Monster Chase Romik
Nightflite 2 Hewson Consultants
Night Gunner Digital Integration
Omega Run C.R.L.
Odmetron Software Projects
Psytron Beyond
Quetzalcoatl Virgin Games
Road Racer Creative Sparked
Rommel's Revenge Crystal
Space Station Zebra Beyond
Space Wars Hewson Consultants
Spawn of Evil DK Tronics
Speed Duel DK Tronics
Seiddab Attack Hewson Consultants
Skull (The) Games Machine
Tank Duel Real Time
Terror Daktil 4D Melbourne House
Timegate Quicksilva
Tunnel New Generation
Vortex JK Greye
Zig-Zag DK Tronics
Zzoom Imagine

MISCELLANEOUS
(Games in which 3D elements are employed, not necessarily on screen)

Airliner Protek
Atic Atac Ultimate
Deep Space Postern
Desert Patrol C.R.L.
Forest (The) Phipps Associates
Haunted Hedges Micromega
Heathrow ATC Hewson Consultants
Moon Buggy Anirog
Orpheus C.R.L.
Painter C.O.S.
Tanx DK Tronics
Turbo Driver Boss UK

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KERRASH! N·E·W·S

The Something Mage

Accor[illegible] (ma[illegible] I'm [illegible] Tu[illegible] as [illegible] perhaps [illegible] wor[illegible]g [illegible]ver, and [illegible] in [illegible] of [illegible] that [illegible] par[illegible]lar [illegible] be [illegible] a [illegible] The [illegible] p[illegible] Hewson [illegible] Oxfordshire, [illegible] Steve T[illegible] [illegible] a [illegible]

Th[illegible] in [illegible] and [illegible] solving to u[illegible] an [illegible] all [illegible] there [illegible] sequences. [illegible] Musi[illegible] and [illegible] There [illegible] such [illegible]

[illegible]

Laser Snaker Winners

Poppy Soft's latest release *Factory Breakout*, looks set to become an arcade winner, and is certainly a very original game. Last year Poppy Soft brought out *Laser Snaker* and ran a competition in conjunction with the game. They are now pleased to announce the winner of the competition. He is **Mr James Garrett** of 120 Sandy Lane, Cheam, Sutton, in Surrey. Mr Garrett receives a cheque for £100 and an advance copy of Factory Breakout. Runners-up also receive copies of the new game.

Go Nord

To cap off the day at **Hewsons**, came the news that their adventure *Fantasia Diamond*, entered in for a French adventure game competition (as reported last issue) had won **Le prix du Meilleur Scenario** for the best game scenario in the prestigious Grand Prix Internationale du Logiciel d'Adventure (ah zose French) organised by major software distributors Video Telemart Report. This win has led immediately to a substantial order for the game – but in French language. Work is already well under way! So are plans for Dutch and German versions. Rumours that Hewson's are translating the game into Russian, Mandarin Chinese and Australian are probably a little exaggerated! as everyone knows, the Australians don't have to buy software, they just seem to rip it off.

Gordon Hewson, Andrew Hewson and assistant Debbie Sillitoe ponder the problems of French over a relaxing game of Les Guerres d'Espace en Trois Dimensions.

60 Words per Minute at Your Fingertips

The Spectrum's full capabilities have rarely been used fully by those wishing for serious applications like word processing because of the small rubberised keys and membrane keypad. This makes fast typing almost an impossibility. But now **Advanced Memory System's** *Lo Profile* keyboard comes to the rescue.

The Spectrum's PCB is placed inside the keyboard housing in such a way that all connections for TV, cassette, power and interface use ports at the rear of the unit. There is no need to adapt any of the connections.

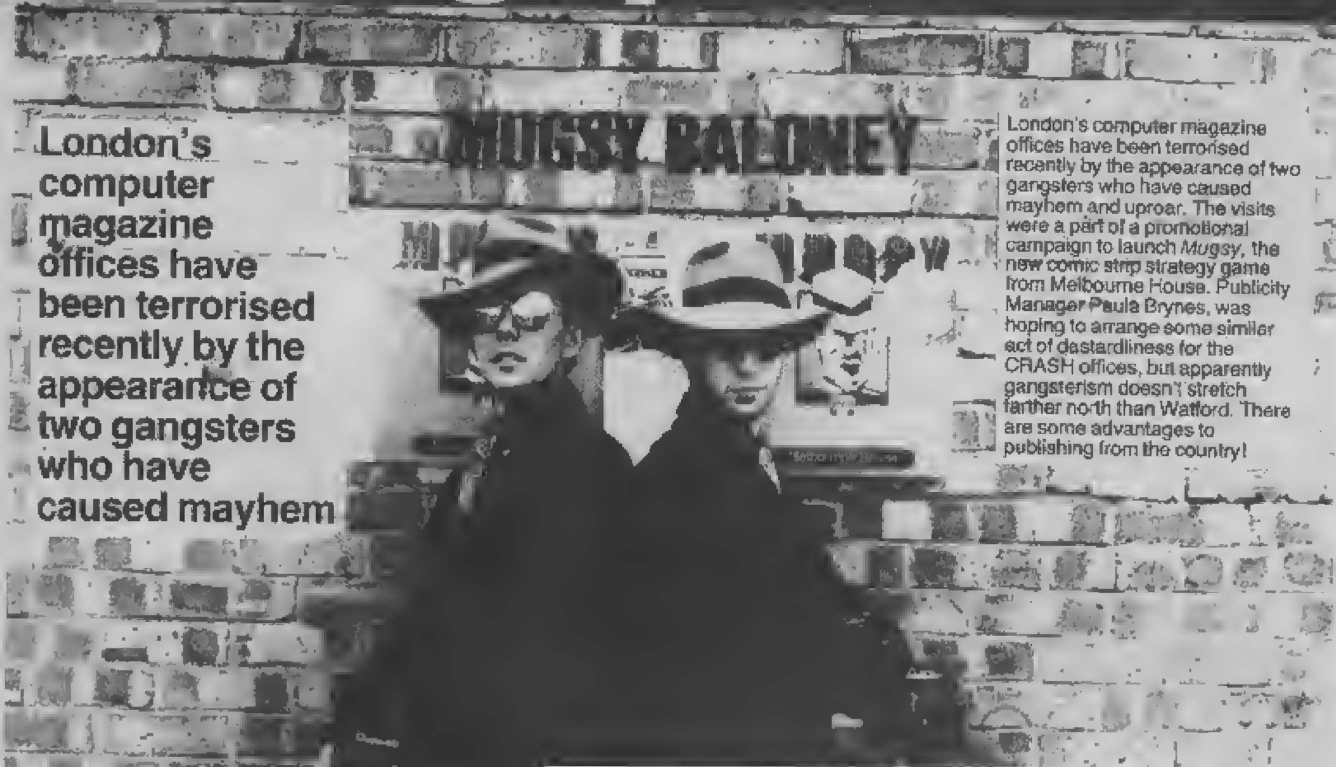
The keyboard features a full length spacebar and a dedicated numeric pad. The keyboard increases the Spectrum's 40 keys to 53. All the keys carry full labelling of characters, commands and functions as on the Spectrum's own keyboard. Together with the height-adjusted layout of the key rows, the *Lo Profile* allows for full speed typing.

AMS are known for their 3indisc drives for the BBC Micro, but now they feel they have achieved a high standard add-on for the Spectrum as well with the new *Lo Profile* keyboard. It is available from selected Spectrum dealers or direct by mail priced £49.95 plus £2.50 for p&p from **Advanced Memory Systems, Green Lane, Appleton, Warrington, Cheshire WA4 5NG.**

LO PROFILE keyboard for the Spectrum.

MUGSY BALONEY

London's computer magazine offices have been terrorised recently by the appearance of two gangsters who have caused mayhem



London's computer magazine offices have been terrorised recently by the appearance of two gangsters who have caused mayhem and uproar. The visits were a part of a promotional campaign to launch *Mugsy*, the new comic strip strategy game from Melbourne House. Publicity Manager Paula Brynes, was hoping to arrange some similar act of dastardliness for the CRASH offices, but apparently gangsterism doesn't stretch farther north than Watford. There are some advantages to publishing from the country!

A fully programmable joystick interface with DK'Tronics.

DK'Tronics Interface

DK'Tronics have brought out a programmable interface for the Spectrum. This can be programmed from the keyboard, or with the machine code software supplied, and allows all possible combinations to be programmed, i.e. left, right, fire, etc, all at the same time. The keyboard is not rendered inactive so that both joystick and keyboard can be used while the program is running. The port accepts any Atari D-type joystick and the interface is compatible with Interface 1 and Microdrives. It also has a through connector for add-on expansion. The programmable Joystick Interface retails at £22.95 and is available now.

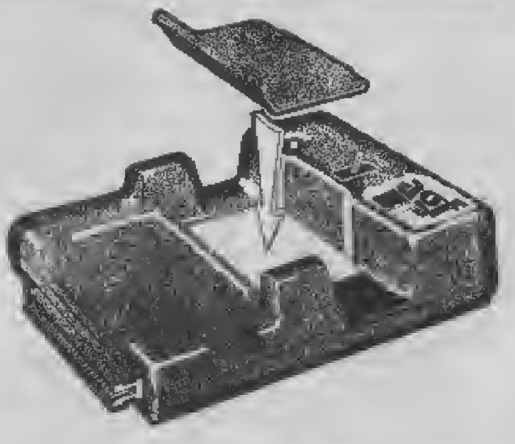
Police Investigate Spirit

Bogus software company **Sprit Software**, who widely advertised a game called *Formula One* and boasted it would come complete with a steering wheel joystick for £8.95, are being investigated by London's Metropolitan Police. A Mr Alexander is being sought, not only by the authorities, but also by the several magazines who accepted his advertisements and have not been paid. Mr Alexander has been a rather shadowy figure on the software scene for some time, and his name has been associated with some other companies of dubious honesty.

The Kensington police, responsible for the investigation, are returning cheques sent in by mail order customers to Spirit Software. These are only those cheques which were still uncashed at the time of Mr Alexander's disappearance. Customers whose cheques and postal orders have been cashed are unlikely to see their money back.

I·N·P·U·T . . .

Your Flexible Friend – the Interface



Looking remarkably like one of those doobries they use in stores for recording the details of your Access or Barclaycard, is the new programmable interface for the Spectrum from **AGF**. Called the **Protocol 4**, it is designed to give compatibility of any joystick or trackball with absolutely all Spectrum software. In essence the Protocol 4 is a fully hardware programmable joystick interface, but it has been designed to be easy to use with credit-card style programming cards.

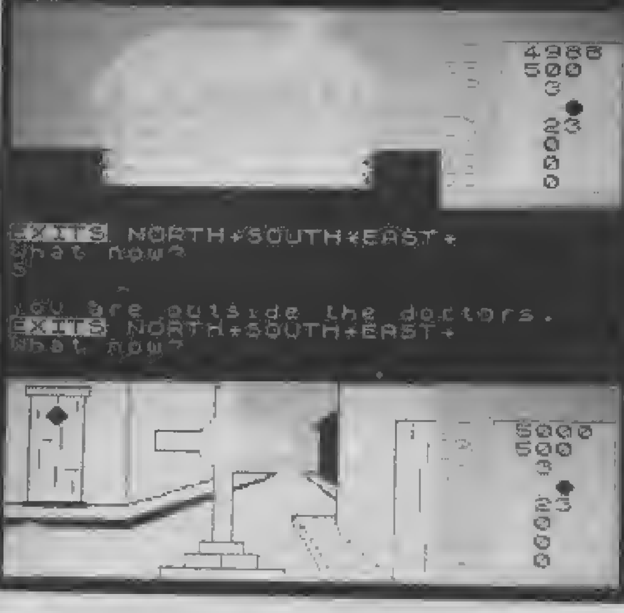
Snap-in program cards configure a membrane keypad and with the preset cards supplied it interfaces four in one: AGF/Protek, Kempston and Sinclair 1 or 2. Extra packs of cards are available for £3.95 (pack of five).

Protocol 4 has a side entry joystick port and rear expansion port, and retails at £29.95 (plus £1 p&p direct from AGF). AGF Hardware Dept. L, Freepost, Bognor Regis, West Sussex PO22 9BR.

Level 9, who may have been the first UK firm to start an adventure help service, have always sent written replies to queries about their adventure games. But now they are supplying comrehensive clue sheets which provide alphabetical lists of the objects, creatures and trickiest locations in each adventure. They have up to 580 entries which should sort out most adventurers' problems. They are free to players who send a stamped addressed envelope to **Level 9 Computing, 229 Hughenden Road, High Wycombe, Bucks HP13 5PG.**

Magra – meaner than ever

If the witch **Magra** seems a bit tetchy it's possibly because she's been rather delayed (buses not running properly again). But arrived she has – *wrath* and all. No, there isn't a review in this issue, that's asking too much! Everything has gone off to **Derek Brewster** so watch out in the next issue. Meanwhile, to keep you all going, here's a couple of screen pictures!

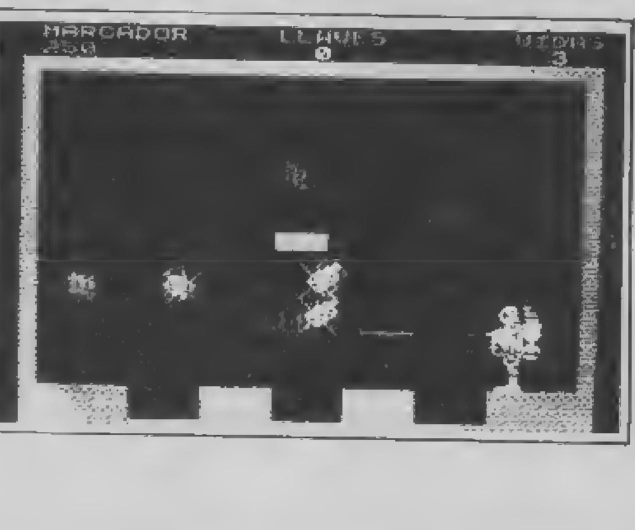


```
EXITS NORTH*SOUTH*EAST*
What now?
S

You are outside the doctors.
EXITS NORTH*SOUTH*EAST*
What now?
```

Spanish Action

Keep an eye peeled for new software house **VENTAMATIC**. This company is new to Britain, and hails from Barcelona, Spain. Review copies of some of their new Spectrum releases arrived too late for review in this issue, but they'll certainly be appearing in the next. The games include *Crazy Climber*, *The Builder*, *Martian Tunnels* and *Wreckage*. As you can see from the screen below, the graphics are large and very detailed. More news next month.



Data Clones Incentive

Dataclone, the cassette duplication company' has introduced a new production technique which they claim will help combat priacy,. The new system is called **Power Load** and has been developed by **Incentive Software Limited** (*Splat*, *Mountains of Ket*, etc). The system is exclusively licenced to Dataclone.

It is claimed that using Power Load for duplication results in cassettes which are extremely hard to copy on any system, either by bit copying, audio copying or code breaking, as only by unique software control can the program be duplicated by the pirate.

Additionally Power Load, using data compression techniques, reduced the cassette's loading time drastically, a CBM 64 by two-thirds and a Sepctrum program by one half.

Bigger Incentive

On the subject of **Incentive Software Ltd.**, it has just expanded to the tune of **Darry Still**. Still (22) has joined the Reading-based company as Co-ordination Manager responsible for marketing and administration. He previously worked as manager of a large computer shop in Reading. Incentive is now looking for another in-house programmer to assist in its continued expansion. That Ian Andrew is obviously empire building on the success of his Splat Mats!

New man at Incentive – Darryl Still.

Ocean on the move

Ocean have moved into new premises in Manchester. The 4,000 square feet of offices house new facilities for Ocean's team of in-house programmers.

New equipment for extra processing power has also gone into the new Central Street premises. Included is an emulator for Z80 machines with hard-disc storage back-up for routines.

LETTERS

Lloyd Mangram overworked +UNDERPAID
W7

*Each month I'll be choosing the best letter from the postbag, and, as well as publishing it, **I'll send the writer £12 worth of software** of his or her choice (it can be two cassettes as long as they come within the £12). I've had to grovel on bended knee to the editor for this, so you'd better be grateful!*

*Send your letters to **Lloyd Mangram, CRASH Forum, PO Box 10, Ludlow, Shropshire SY8 1DB.** I can't promise to print everything that comes in because space is precious (I'm told) but I'll do my best.*

Our editorial piece in the May issue of CRASH on software piracy has resulted in a number of letters offeringt differing views on the subject. So too has the short piece about Personal Computer Games, replying to their gossip column slur on the name of CRASH! But this month's winning letter has nothing to do with such stirring matters . . .

HAPPILY EVER AFTER . . .

Dear CRASH,

I just had to write to explain my introduction to the paraphernalia of computers.

I'm what you call a tolerant wife who for months put up with my husband ranting and raving about his Spectrum. He would come home from work, kiss the computer and sit there hammering away at its keys all night. Well!! I thought there's got to be a reason!! So one afternoon I started browsing through my husband's collection and a magazine caught my eye – a giant Kong eating a Spectrum. It amused me, 'cause at the time I felt rather like that monster. Anyway, I started flicking the pages over and reading the reviews and, my gosh, I enjoyed it!

Well that afternoon I rushed out and bought *The Alchemist*, which you rated 86%. By the time my husband came home I'd really caught the bug.

So now we come home, have tea and play the Spectrum together. As they always say, 'If you can't beat them, join them.' Thanks CRASH, you're great!

Mrs J. Talbot, Bromsgrove, Worcs.

Really we're all soft at heart, Mrs Talbot! Your letter caused such a warm glow in everyone at the CRASH offices – even Mr Kean's perennial grimace softened. So that's £12 worth of software on its way...
LM

As I said, the piracy article prompted several writers . . .

GRAMMATICAL PIRATES

Dear Sir,

I go to a grammar school and, of course, in the junior years a lot of this (*copying*) goes on. In some ways it is obviously damaging, but I know several people who would not buy a game unless their friend gave them a copy of one of his, and vice versa. So, there you have two games purchased instead of none. This isn't just my opinion, but I feel it is quite a valid point.

Tim Arnold (14), Wisbech, Cambs.

Well the mathematics sound fine, Tim, but I wonder whether the software houses agree.
LM

DON'T KILL THE GOOSE

Reading your magazine, I came across D.H.'s letter on copying. I know that illegal copying is disrupting software houses, but when you manage to scrounge the cash off your parents for the computer, there is no cash left for the cassette recorder, TV, etc, let alone for the cassettes at £5 plus. You just can't afford it.

However, software houses should not be too dismayed over schoolboy copying. It makes their games popular and far from taking profits away, they stimulate sales. Spectrum games, for example, the easiest to copy, outsell all others. Computers which have sophisticated protection are not as popular, and prices for games are much higher – e.g. Dragon, BBC, Commodore. I agree that commercial copying is wrong, but be careful software houses – don't kill the golden goose.

J. Parker (address withheld by request).

Perhaps you're right, BUT, making a game popular isn't the same thing as ensuring the software houses receive the proper benefit!

ORGANISED PIRATES

Dear CRASH-ers,

Interesting editorial in issue 4. The main aim of software houses seems to be to make it impossible for **independent pirates** to copy tapes. However, **organised pirates** may be able to afford to buy the devices available, examine them and find a way to reverse their effects.

Hopefully, these security devices will be watch-dogged to see that they only go to respectable software houses. However, what is to stop pirates taking over or creating a software house and then using their machine to pirate tapes as a sideline? No security device can be infallible.

Let me confess, I enjoy breaking into programs – but only to see if I can do it. I do not pirate, nor do I condone it. There are no pirate tapes in my collection and there never will be. If unbreakable systems mean no more breaking into games for me and those like me, well then I'm willing to pay that price for a secure future of software houses.

Brian H. Longstaff, Sheffield, S. Yorks.

Obviously there's nothing to stop pirates taking over or creating a software house. I know of several people who have done exactly that. Fortunately the police are looking for them even now. Security devices are hardly likely to stamp out illegal copying or prevent clever disassemblers from getting into the software, but obviously the software houses have been alarmed at the extent of illegal copying and the general level of ignorance that has led people to believe that 'it is only little me, what harm am I doing really?' By bringing it into the open as they have, at least the subject is getting an airing.
LM

SEEING SENSE

Dear Sir,

In the May issue of CRASH there was a letter featured written by a grandparent about printing games keys for pirates. I read your reply and for the first time I saw sense. Before Christmas I was with the Pirates, now I'm not so sure. I have a suggestion though – why are games pirated? Got it? Yes! because they're expensive. WHY? we shout.

What's so special about some plastic and dioxide tape with a few beeps on it? We don't know!

Fair enough. The programmers must be paid, but why is there such a price difference? I am a great fan of pop music, but do I go around swapping copies of my records? NO! WHY! Because they don't take six weeks to save up for on an average of £1 a week pocket money. So please, software houses, save your own necks and put down the prices a bit.

Neil Sumser-Lupson (13), Norwich, Norfolk.

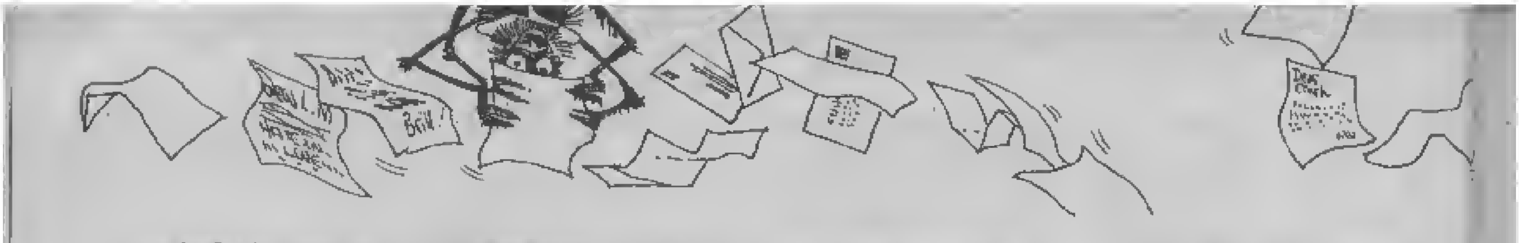
We have already made a mention in an earlier edition of CRASH regarding the amount of money a software house makes from sales of cassettes considering the number of sales compared with those in the music industry. I wonder, though, what the software houses actually have to say?

On to the other touchy matter – our beloved editor's snappy rejoinder to Personal Computer Games magazine!

TRASHY GOSSIP

Dear CRASH,

I've recently bought issue 4 and read an article called *Trashy Gossip*. I think it's totally wrong, all that rubbish about PCG is better than CRASH. I buy both magazines and find that your mag is much better. Your reviews are



more detailed for a start. Lots of PCG is listings and adverts.

Javid Karim, Royston, Herts.

Thanks, Javid. Jason West wasn't quite in agreement though . . .
LM

SADDENED

Dear Mr Kean,

I totally agree with you on the subject of bad journalism and comments between magazines. Personal Computer Games fell from my view of it as a good magazine after that pathetically childish editorial they printed about your magazine. BUT the juvenility of that editorial did NOT need to be counter-attacked in the way you did in your editorial. It was so utterly futile of you to lower yourself to the standard of journalism blatantly showed by that magazine. All you did was revert to the childish element apparent in the PCG piece.

I can't express how sad I feel that a magazine of such a usually high standard had to stoop so low to make its anger known. It wasn't really necessary to do that; anyone could see how unintelligent the PCG editorial was.

Please, you should know by now that two wrongs don't make a right. Don't do it again.

Jason West,
Orpington, Kent.

A note on my desk (in editorial long hand) tells me to say that even editors have bad days sometimes, and Roger Kean had one that day. He goes on to say that he agrees with you Jason – two wrongs don't make a right.
LM

HAVE MORE FAITH

Dear Lloyd,

A couple of weeks ago I saw a snippet in PCG. It 'mistakenly' called your magazine TRASH in an attempt to put you down. I was about to write to them about their childishness when I saw your equally childish reply. I may be only 13, but I am still above such pointless name-calling. I also hope you have more faith in your readers than to think they will be put off your magazine by such gossipmongers. I do find your magazine to be a good one, well worth 75p, so please don't spoil it with such articles.

A.C. Rawston,
Leeds, W. Yorks.

Such tickings off show you care, and your attitude gives us faith. Thank you!
LM

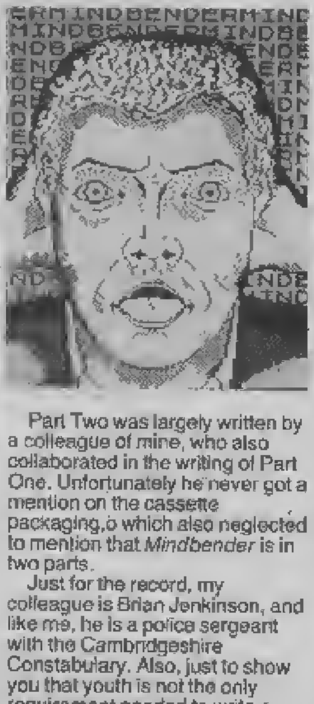
COP THIS PAIR!

Dear CRASH,

Thank you very much for the most encouraging review of my program *Mindbender*, which you featured in the May issue.

I had seen a galley proof provided by Gilsoft but it was quite a thrill to buy your magazine on day of issue and see it was part of a five-page article.

Did you realise that *Mindbender* is, in fact, a two-part adventure? On the reverse side of the tape is the second part of the mission, playable once you have escaped from the undergropund complex in Part One.



Part Two was largely written by a colleague of mine, who also collaborated in the writing of Part One. Unfortunately he never got a mention on the cassette packaging,o which also neglected to mention that *Mindbender* is in two parts.

Just for the record, my colleague is Brian Jenkinson, and like me, he is a police sergeant with the Cambridgeshire Constabulary. Also, just to show you that youth is not the only requirement needed to write a program, I'll tell you that Brian is 34 and I am 39 years old.

We are both now engaged in writing further adventures and have completed one already, called *Madcap Manor*. Needless to say, we get an enormous amount of enjoyment in writing adventures, and any sales that result are really just icing on the cake, so your review was most gratifying.

P.A. Styles,
Whittlesford, Cambs.

Yes, we thought it a little odd that there were no instructions on the insert, when the program implies that they aren't on-screen because they may be found on the insert! Looking forward to Madcap Manor! But just to show that you can't please everyone, we received another letter from a programmer . . .
LM

KNIGHT DRIVER

CRASH Forum,

The scene is set on a bleak grey Saturday morning, as a machine coder lies slumped over his Spectrum. It's 8.31 am and the still room is disturbed by the never-ending tick tick whir of yet another Micro Drive which won't stop. The programmer is awakened by the sound of a CRASH in the letterbox.

8.32 am – and let the reading commence.

9.12 am and the name *Knight Driver* errupts from the page, striking vague shovels of recognition in the still sleepy mind of the programmer. Isn't this the game he wrote whilst discovering the inner intricacies of the Z80 processor? Read on.

Hey! What's this? 'Contains some BASIC . . . no joystick options . . . can't cancel end game report.'

No, surely this can't be right – zero cancels the report as well as the demo. Both Kempston and Interface 2 joysticks are automatically detected and the game is thoroughbred machine code.

Oh dear, what can I do to rectify this situation? Why, I must write to CRASH in the hope they will print my letter. Thus said, here it is, and who says programmers don't have a sense of humour?

Clive Brooker (Knight Driver), Ashford, Kent.

Thank you, Clive. Should you prefer reviewing to program writing – there is a vacancy just come up! The Ludlow public gibbet is getting quite packed with ex-reviewers.
LM

SATISFIED

Dear Sir,

After reading the review on *Fighter Pilot* in the March issue of CRASH, I just had to buy it. But as all the shops in my area had sold out of the game I decided to buy one from your magazine's mail order.

I sent off the postal order to you first class, and amazingly received the game three days later. So this letter is just to recommend any other readers who have considered sending off for games to do so without hesitation!

Mark Harrison
Redditch, Worcs.

I was told by the denizens of the MO dept. to print this letter or risk the consequences! They made me an offer I couldn't refuse! Still on the subject of mail order, but on a less happy note, we continue to receive letters from people who have lost money after sending it to Spirit Software . . .
LM

FORMULA NONE

Dear Sir,

After having seen page 110 in the May CRASH, I would like to bring to your attention **Spirit Software**, who advertised a program called *Formula One*, plus a steering wheel for £8.95.

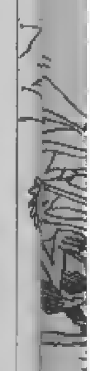
I sent a cheque on 22/2/84 which was cahsed on 29/2/84. I have received nothing. Apparenty the address is an empty office in Kensington and the telephone number is constantly engaged. I believe that Spirit has not paid for its advertising and I am resigned to the fact that my order will remain unfulfilled and that I am unlikely to receive my money back.

It has been a painful experience, but the issue is this. How far-reaching is GOSH's sphere of activities? We all know that Ultimate, for example, are unlikely to default, yet, paradoxically, these blue-chip companies are the ones GOSH protects us from. I would hope that one day I would be able to send a cheque to a one-man operator with the same confidence as one sent to a biggie. So, please GOSH, rethink your responsibilities, or are you destined to become a bulldog without teeth?

Name and address withheld by request.

If you have sent money or cheques to **Spirit Software**, *you are indeed, unlikely to get anything back – certainly not the fictitious Formula One with steering wheel, and it's doubtful whether any money. Those fortunate to have sent cheques late in the day, may be luckier. The Metropolitan Police are investigating* **Spirit Software** *and its directors and have been returning uncashed cheques which they have found. CRASH also sent for the program some months back, and our cheque was uncashed and has been returned by the police. Anyone who would like to check this out with the police can ring Kensington police station, telephone 01-741 6212.*

As to the responsibilities of GOSH – it is still rather early days. Voluntary organisations such as GOSH do take time to find their feet, and of course remain powerless in many circumstances. Rogue companies have always made a killing in any market and no protection system can contain that sort of thing, it can only try.
LM



THE GAME

Dear Lloyd,

I am only writing to say what a great mag you publish but also to say thanks for forwarding my name to Liz Harris (researcher for Yorkshire TV) who sent me an application form for the new TV programme *The Game*.

I went for an audition and was lucky enough to be chosen to appear on TV to play *The Game*. (Actually, there's three, but I can't give too much away.)

It will be screened in July through to August on Monday nights. Unfortunately there are no celebrities on the show (except me) contradicting an article I had read in CRASH (May).

I would like to close by saying 'Hi' to all the others who also appeared on *The Game* as I know they know your magazine.

Jonathon Stainsby,
Shipley, W. Yorks.

See! Reading CRASH can even get you on to the telly! Hopefully The Game will prove popular, and be networked throughout the country later on.
LM

MR. ANGRY

Dear Sir,

Please print this letter as it will probably save a further 50,000 people from doing the same and should clear up one vital point once and for all. I have founded a Hobbit (computer games) appreciation society and the mindless little jerk who wrote the letter headed 'Black ZXTal' and (can I bring myself to say it?) I quote, 'I think *Valhalla* is twice as good as that boring game, *The Hobbit*', deserves his spleen ruptured.

How dare he compare the masterpiece of 40K of pure machine code with the rushed 28K of (badly written) BASIC and some ineffective machine code routines which frequently crash in *Valhalla*? Coupled with the (almost) identical backgrounds and the pathetically animated (?) blobs (which seem to have about as much intelligence as a dead rat) makes *Valhalla* a world beater as far as a waste of money is concerned.

How dare he compare the detail in *The Hobbit* (such as each character being given a personality and inventory) to badly written rubbish with the following 'features': if more than six objects are dropped on screen (the computer can apparently only hold six for each location) Klepto arrives (kleptomaniac – get it?) and picks up what you drop (presumably to stop the game from crashing); you get an out-of-screen error if you try to type in something when other things are happening; if a printer is attached, the computer oftren goes haywire with nonsense spewing out of it.

I'm sure the 100,000 *Hobbit* fans out there agree with me in saying that *The Hobbit* is, and will remain, the best and most sophisticated adventure (at least until *Sherlock Holmes* is released).

I hope that has clarified the situation and hopefully put a few minds at rest (I was seething!). If anyone else would like to write to me concerning the **Hobbit Appreciation Society**, please send a small stamped addressed envelope with your correspondence and I will reply to you promptly.

Nigel Foster,
12 Middlefield Lane,
Hinckley, Leicestershire LE10 0RB

Well, I think that's certainly clarified the situation nicely, Nigel – whatever you do, don't slam the phone down, please!
LM

LOTS TO SAY

Dear Ed,

Lots to say so will be brief and to the point. First, I agree with the bloke in last month's issue headed ZXTal. This is not worth the £7.95. One it's slow, two – comprehensive instructions are virtually non-existent, three – there are many other games more devious, sophisticated, faster and interesting than this. Not that I want to take away anything from Carnell, you understand, but this game seems to be as overrated in computer games as Casablanca is in films. (That's one of my favourite films! LM)

Second. In last month's issue I was highly impressed by the developed English and generally intelligent review composition that J. Singh and others presented. You yourself said the standard in the competition was high. I then considered whether it might be worth trying this on a permanent basis – as it were, a closer relationship with the readers, thus making the readers feel more relaxed with reviewers with whom they can relate.

Third. When is that article on joysticks you promised going to materialise?

Fourth. Although it doesn't completely spoil my monthly reading, it does irritate me slightly as I view the seemingly endless typing errors or printing errors which crop up. Last month I counted 20 plus, giving up eventually. If it gets any worse I'm sure your readers will be sending unending letters for you to cringe at, or undoubtedly more terrific poems from Mark Harvey.

Spec I,
Stockton, Cleveland.

To take the points in order: I have no strong views one way or the other about Black Crystal, *never having got off base 1 with it. But I do know that* Wrath of Magra *comes complete with the fullest instructions possible – it weighs a ton! As to readers' reviews – this has been under consideration. The trouble with it is largely the insane schedules for a monthly magazine, which mean we must be able to absolutely rely on material coming in when it's supposed to. Still, the idea is still under consideration. The joystick article will happen, but we delayed it because every other magazine under the sun did it to death just before Christmas. also, there has been a lot of developments in interfaces and joysticks since, so the material is being looked into with a view to an autumn article. As I think I have pointed out before, CRASH runs to an enormous number of words each month, probably two and a half to three times as many as any other similar magazine. With the best will in the world you are going to get errors which go unspotted in over 120,000 words. By my rough reckoning, last issue's errors ran to a little over 1%of the total wordage, and I don't think that's too bad, though we try to cut even that figure down of course. And anyway, you're right – Mark Harvey has done it again . . .*
LM

Dear CRASH,
Many thanks to all concerned
For publishing my letter,
But just to wrap things nicely up
I'd like to make all better

My poem was not all complete
In the sense the word is known,
For twelve mistakes were omitted,
But you added six of your own!

Why are there so many spelling mistakes
Than any other magazine around?
Because there's so much more writing
Than any other magazine around!

Games I thoroughly recommend?
Well now, let me see . . .
Invasion of the Body Snatchas
Trashman, Jetset Willy.

With 60 rooms and 79 objects
Matthew Smith I must commend,
But the glasses in 'Conservatory Roof'
How? Or I'll go round the bend
(If I'm not already)

Crash is the bestest mag around,
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Tadcaster, N. Yorks.

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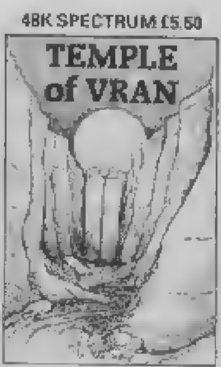

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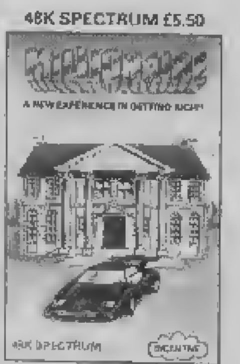

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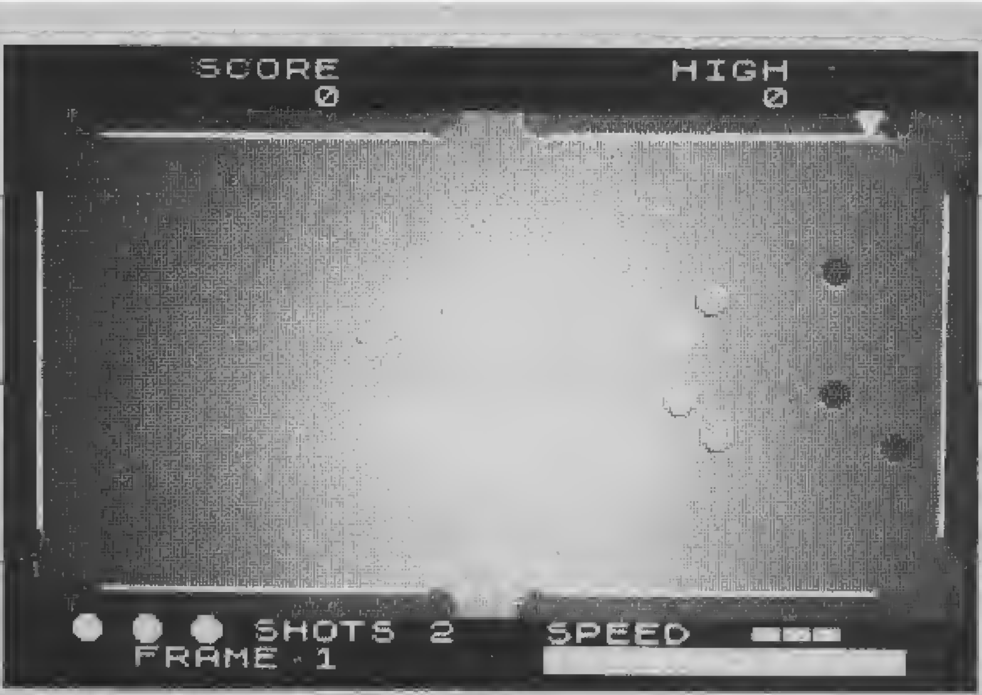

A battle on the cool green baize in the newly repackaged CDS Pool.

Pool

Producer: C.D.S. **Microsystems**
Memory required 16K
Retail price: **£5.95**
Language: **machine code**
Author: **Mike Lamb**

Pool by **CDS** is hardly a brand new game, having emerged in the middle of last year. But most such games were released before CRASH started life, and it's no bad thing to catch up on a few of them, especially if they have been popular, and CDS *Pool* certainly has, remaining in the charts all year. To celebrate its continuing popularity, CDS have now repackaged the game in a new cassette cover which matches the style of their recent releases. The game, however, remains as it was.

Each version has its own peculiarities. In the CDS *Pool* you start each game with three balls and three shots. The object is to pot all six balls on the table, three red and three blue. Aiming the cue ball is done by moving a small triangular marker around the edge of the table, the ball being shot towards the marker (not in the opposed direction as happens in some versions). The marker is moved clockwise or anticlockwise using the S or A keys. Speed of shot is controlled by a five block bar below the display area. After a shot has been taken, the speed setting returns automatically to a value of three.

During a game the number of shots remaining will decrease by one for each shot made, unless a ball is potted on that shot when it will revert to three. After frame three, this is reduced to two shots. Any foul shot results in one of the players three start balls being removed.

Scoring is done by giving the blue balls 20 points and the red 10 points. *Pool* can be played by one or two players, each score being continuously displayed.

CRITICISM

● 'This is an excellent copy of the arcade Pool game (which is, in turn, a copy of real pool!). The graphics are very good, the balls moving accurately and smoothly. Setting up shots is easy with a pointer which the cue ball will aim for. I enjoyed this game and found it rather addictive (mind you, I am a snooker/pool fan) and I feel that all Spectrum owners should have this in their collection, especially if they enjoy the real thing (either video or 'real'). It's a shame you cannot arrange the balls on the table to try out new or trick shots. Overall *Pool* is a very good game.'

● *'Of all the versions I have played, I still think the CDS* Pool *has the best graphics. The movement of the balls is very good, smooth and convincing in the way they rebound. They also come to a rest more realistically than in any other version, and every bit as well as the dedicated arcade version in my local pub. The colour has been well used – there isn't much room for alteration of course – but it all stands out well. Playing* Pool *has been made simple, especially as the cue marker can be inched very finely by tapping the key. Holding the key down will cause it to speed up so it doesn't take ages to move around the table. Definitely the best Spectrum version, and if you haven't already got it and you like table games, then you should have this one.'*

COMMENTS

Control keys: A/S moves cursor anticlockwise,
L = speed, ENTER to shoot
Keyboard play: simple and responsive
Use of colour: well used but naturally limited
Graphics: good movement of characters, well laid out text and scores
Sound: well used with rebound sounds and a strident tone for the cue cursor
Skill levels: 2
Lives: 3 balls
Features: 1 or 2-player games
General rating: felt to be the best Spectrum version, a very well done implementation and good value for money.

Use of computer	79%
Graphics	75%
Playability	76%
Getting started	80%
Addictive qualities	78%
Originality	65%
Value for money	87%
Overall	77%

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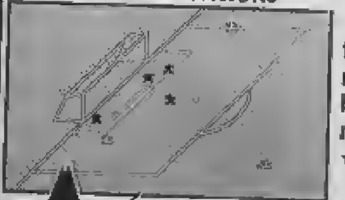

★ Pick your own team for each match. ★ As many seasons as you like ★ Managerial rating ★ 7 skill levels ★ Save game facility.

Addictive

* ZX81 Chart
Home Computing Weekly
1.8.83 and 1/11/83.

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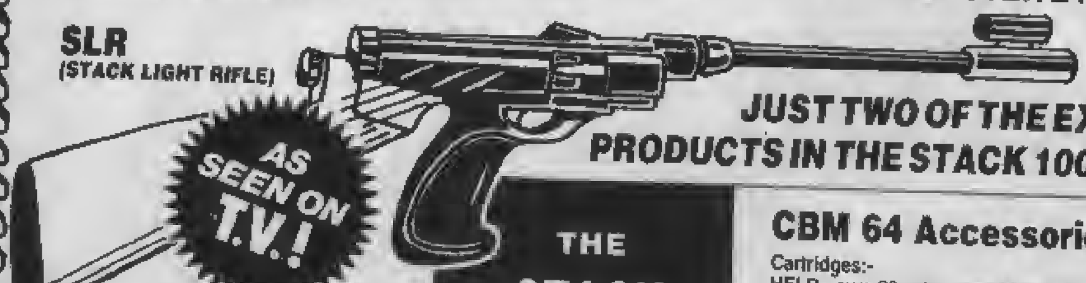
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Crash Competition

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The room is darkened around you, concentrating all your attention on the brilliant green baize of the playing surface under its hot overhead illumination. The tension of the audience watching from the dimness of the surrounding stands is almost palpable in the air. You could cut the atmosphere with a knife!

Your opponent hovers momentarily, poised over the edge cushion, one foot off the floor for better reach. There is a light click of the cue and a double click as the cue ball strikes another and then another.

A sigh from the audience. It's your turn again. You chalk your cue tip and examine the lie of the balls, brilliant colours gleaming on the green. You see your shot – a classic – take your stance, lower the cue and, breathing easily, line up the shot . . .

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Despite considerable competition, **C.D.S. Microsystems** have remained at the top of many software charts with their game **POOL** for a considerable time. In recognition of this fact , **C.D.S.** have now completely repackaged the game in a stunning new cover.

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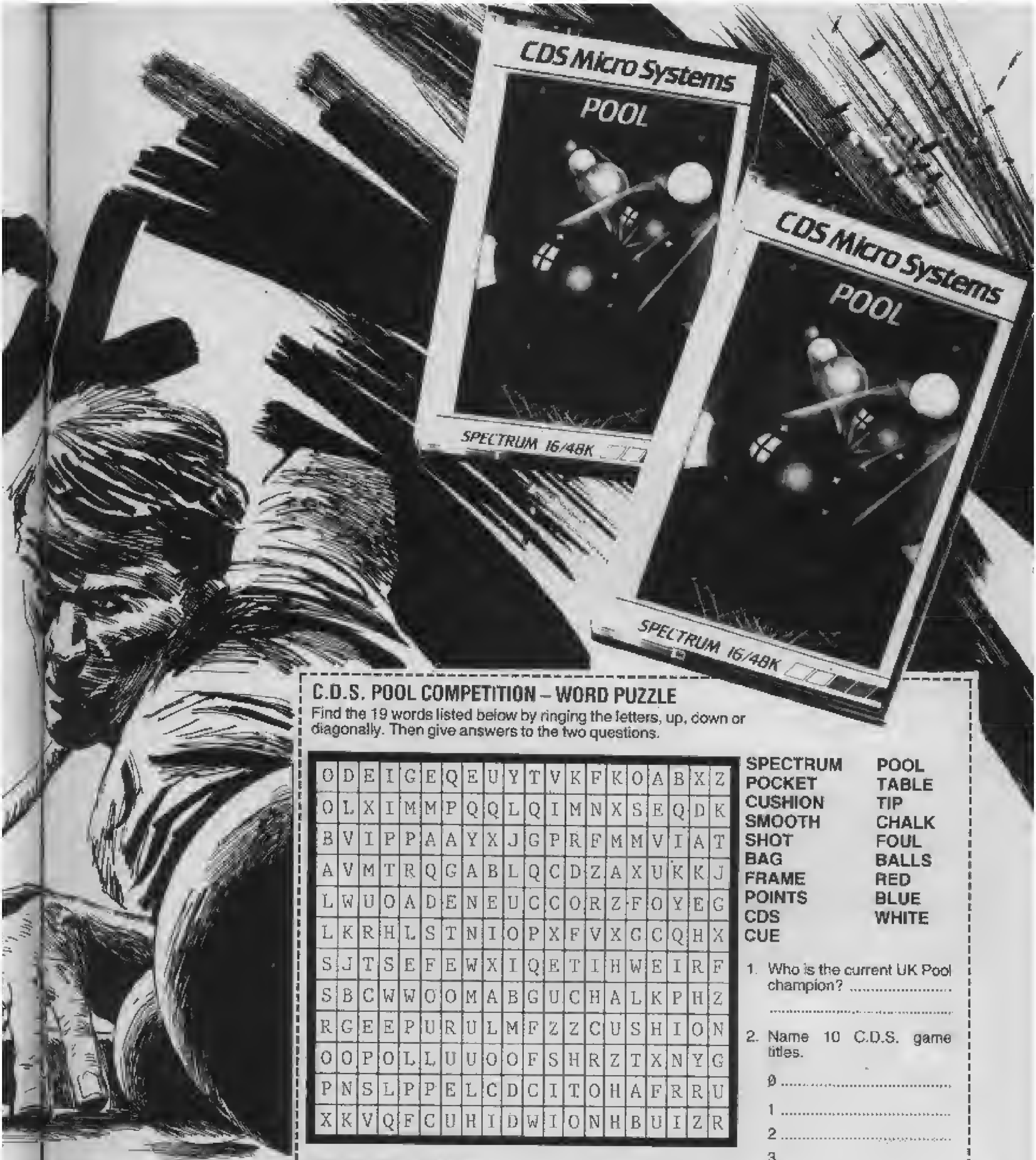

beside it. Additionally you must correctly answer the two questions below the puzzle, fill in your name and address on the coupon and then send it to us to reach the CRASH offices no later than last post on Friday, 27th July. The first 50 correct entries drawn will each receive a copy of **C.D.S. POOL.**

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Find the 19 words listed below by ringing the letters, up, down or diagonally. Then give answers to the two questions.

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O	L	X	I	M	M	P	Q	Q	L	Q	I	M	N	X	S	E	Q	D	K
B	V	I	P	P	A	A	Y	X	J	G	P	R	F	M	M	V	I	A	T
A	V	M	T	R	Q	G	A	B	L	Q	C	D	Z	A	X	U	K	K	J
L	W	U	O	A	D	E	N	E	U	C	C	O	R	Z	F	O	Y	E	G
L	K	R	H	L	S	T	N	I	O	P	X	F	V	X	G	C	Q	H	X
S	J	T	S	E	F	E	W	X	I	Q	E	T	I	H	W	E	I	R	F
S	B	C	W	W	O	O	M	A	B	G	U	C	H	A	L	K	P	H	Z
R	G	E	E	P	U	R	U	L	M	F	Z	Z	C	U	S	H	I	O	N
O	O	P	O	L	L	U	U	O	O	F	S	H	R	Z	T	X	N	Y	G
P	N	S	L	P	P	E	L	C	D	C	I	T	O	H	A	F	R	R	U
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....
2. Name 10 C.D.S. game titles.

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2 ....
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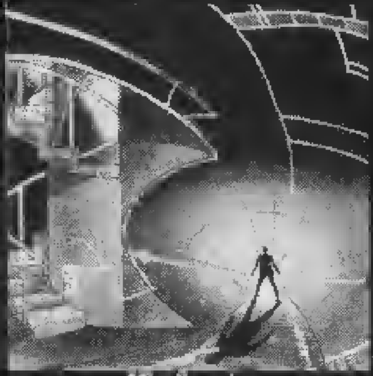

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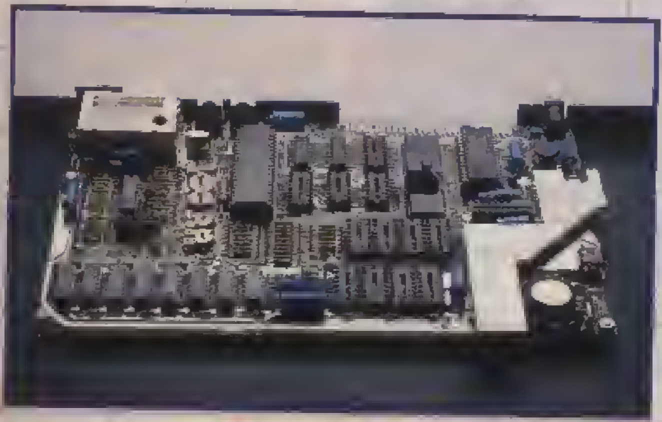

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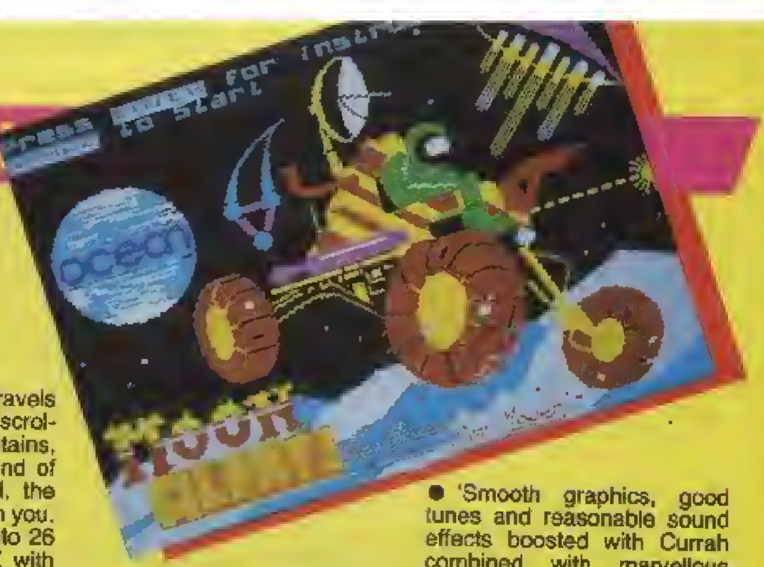


Moon Alert

Producer: **Ocean**
Memory required: **48K**
Retail price: **£5.90**
Language: **machine code**
Authors: **Ken Farmer and Jon Myers**

Ocean's packaging and title screens have been delightful recently, and *Moon Alert* is no exception with the screen (designer D. Thorpe) being based on the cassette cover. The scenario for *Moon Alert* is a familiar one by now. What makes Ocean's version interesting is that they have definitely based this on the moon, with the activity of the Moon Rova taking into account the effects of a reduced gravity field.

Space Fighter 7 has been blasted by the aliens and crash landed on the Moon's surface. Fortunately the Moon Rova, stored on board seems undamaged. It is equipped with bilateral photon canon and perpendicular jet boosters, both of which you will need to survive the long journey back to base. The aliens have located your crash site and are even now scouring the terrain for you.

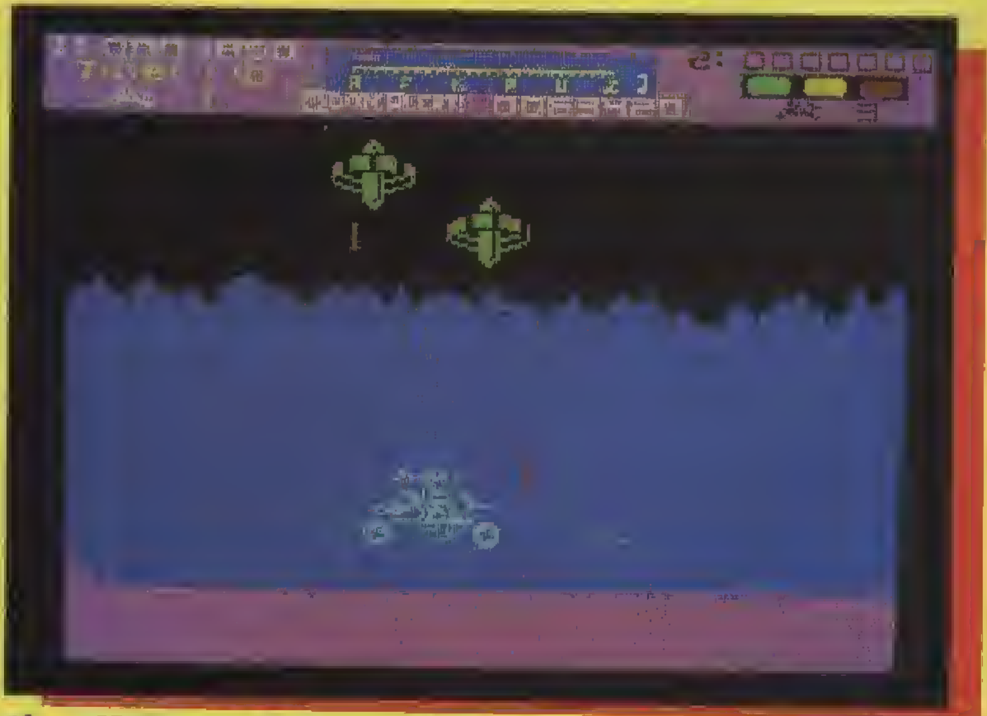
As usual, your Rova travels from left to right against a scrolling background of mountains, and a scrolling foreground of craters, whilst overhead, the alien craft drop bombs on you. The ground is divided into 26 sectors, lettered A to Z with Ocean claiming that over 300 screens are included in the game.

CRITICISM

- 'In my opinion, *Moon Alert* is the best 'Moony Buggy' game I have seen. The graphics are smooth and the jumping over obstacles is excellent. There are many stages and the game is very playable. I liked this one, it has plenty of 'feel, so that jumping over canyons is not just a hit and miss affair. The keyboard positions are good and the graphics and sound are good.'

- *'There have been several Spectrum versions of the "Moon Buggy" game now, and I think Ocean's has been rather long awaited. But the wait is worth it. This is the best yet. Oddly enough, it doesn't look very exciting at first. It isn't violently coloured, just black, dark blue and purple with a pale blue line drawing of the buggy. The rocks are red and the explosions white. There aren't all that many ground-based obstacles – at first, and the hovering aliens don't cause craters with their bombs or lay mines in your path. So at first it looks pretty simple. But it's not. This is a deceptive game, because it trundles along at what seems like a leisurely pace. But it has been designed just right, slowly leading you into impossible situations. I particularly liked the fact that terrain isn't flat with craters. Here you have hills, humps, valleys, many of them awkwardly shaped so you have to time the jumps just right. Firing is nicely paced as well. The graphics are super smooth, leading you on into the growing horror. Suddenly there are triangular things in the air – and they do make craters – and double sized rocks in your path. I must get back and see what comes next. Highly addictive!'*

- 'Smooth graphics, good tunes and reasonable sound effects boosted with Currah combined with marvellous playability, make this the best "Moon Buggy" type of game yet for the Spectrum. If it isn't entirely original, Ocean should get a good rating because of the original way in which the game has been implemented. I particularly liked the way each zone is sectioned off by letters of the alphabet which come scrolling into the screen as you drive over them. Loss of life means you go back to the start of the sector you are in, not the beginning – until you lose all your lives of course. Highly addictive and maddening to play.'



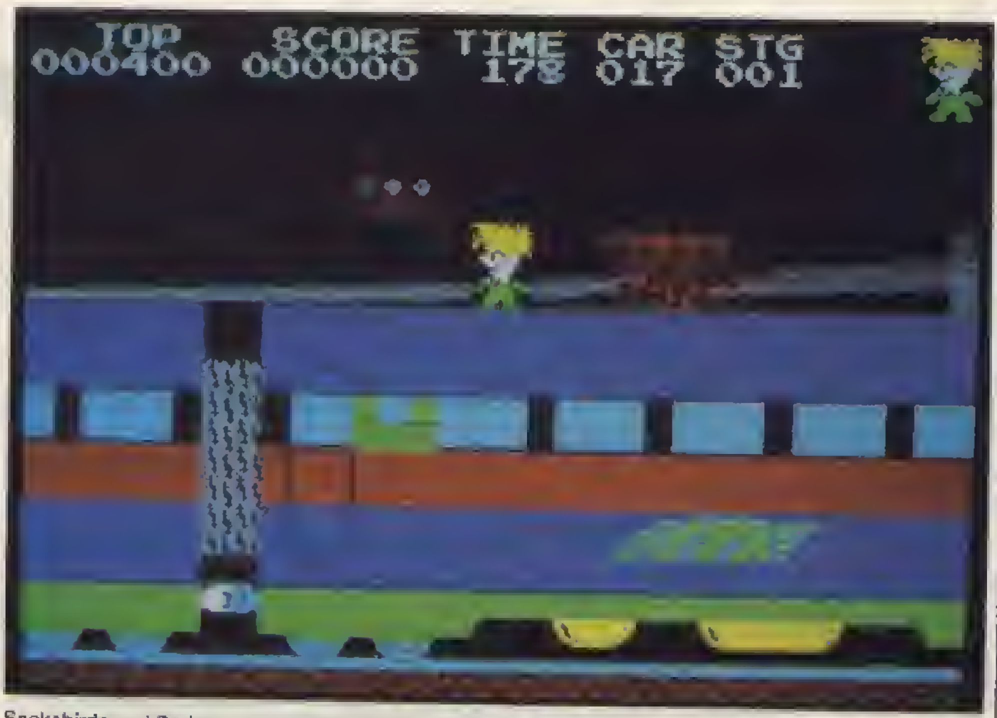
COMMENTS

Control keys: alternate keys bottom row for left/right, keys on the third row for jump, keys on the second row for fire
Joystick: Kempston, Protek, Sinclair 2
Keyboard play: good positions, with plenty of options, very responsive
Use of colour: good
Graphics: smooth, well detailed
Sound: good tunes, plenty of incidental effects
Skill levels: 1 but progressive difficulty
Lives: 4
Screens: continuously scrolling
Features: 1 or 2 player games, Currah microspeech facility
Originality: hardly an original idea, but a good version of the arcade original, and particularly well implemented with imaginative features
General rating: very addictive, playable and generally very good.

Use of computer	86%
Graphics	89%
Playability	95%
Getting started	88%
Addictive qualities	94%
Originality	83%
Value for money	90%
Overall	89%

Stop the Express

Producer: **Sinclair**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Hudson Soft**



Snakebirds and Redmen on the 9.15 – can you Stop the Express?

Trains seem to be in the news this issue, what with Blaby's *Casey Jones* and now this original game marketed by Sinclair. Hudson Soft is the Japanese company who have been releasing games in Britain recently. Anyone who has ever wanted to do one of those scenes in movies where the hero runs along the tops of the carriages on a moving train, can now have a go!

The ITA Express has fallen into the hands of the evil Redmen. As Special Security Agent, your task is to stop the train and apprehend the vile criminals before they reach the border. You must reach the front carriage and unlock the motorman's cabin, avoiding the thrown knives of the red rotters and their fists. Your only weapons are your wits, skill in timing and the likeable Snakebird.

The screen shows the carriages of the moving train, almost filling the playing area. You are lowered from above on to the roof of the last carriage. The train's motion is indicated by the backward scrolling ground beneath the train, and the flashing telegraph poles behind it. As you run forward, the carriages slowly scroll backwards. Thrown knives are ducked by falling flat and the gaps between carriages are negotiated by jumping. If the pursuing redmen catch up with you, or one of their knives hits you, you are flung off the train, which sails on without you.

Occasionally a snakebird flies past. Leaping up will enable you to catch one, and pressing the fire button will release it to attack your pursuers. Just below the score line is a caution signal which flashes whenever an overhead electric stanchion is approaching. Running your head into one of these is painfully fatal!

If you get through the first screen, the scene cuts to the interior of the carriages – a sort of cutaway view. Here the hero must use the passenger hanging straps to swing up and avoid the redmen, or it's possible to leap over them, even kicking them in the teeth. But watch out for the ghostly red things that inhabit the straps as well.

The first stage is ten carriages long, stage two is the same before the motorman's cabin is reached. Each redman thrown from the train scores 100 points whether it is the released snakebird or a kick which sends them flying.

CRITICISM

● 'This is like a scene from a James Bond film. A very original idea nearly always sells cassettes – this is original and great fun to play. The train carriages are well drawn and colourful. 'You', your enemies and the snakebirds all move very fast. The sound isn't bad, with a clicky effect resembling the wheels going over the rails. One disadvantage with keyboard play is the number of keys needed to move and operate your man. One of the better games that Sinclair has just released.'

● '*The graphics in* Stop The Express *are quite impressive, probably because the train carriages are so large and colourful, but there are lots of other neat details, like the telegraph poles and sagging wires which can be seen above the roof and below the wheels. also the overhead electric stanchions move in perspective as they flash by above you. Should you fall off, the train goes on by – the exact number of carriages you have already got across. This is a game which requires nifty timing and responses, but which lets you improve, since the same events happen each life, so you get the hang of it eventually. Very addictive.*'

● 'No help is given from the snakebird once you are inside the express, so you must time your jumps and kicks very well. There's also this awful thing hanging up on the hanging straps which is after your blood. On top of the train it's worth being careful with your snakebirds, as they are only effective for the length of one carriage, falling off at the end. Also, you can only carry one at a time. This is a highly original idea with imaginative graphics which also has just the right sort of ingredients to make it fun and addictive.'

COMMENTS

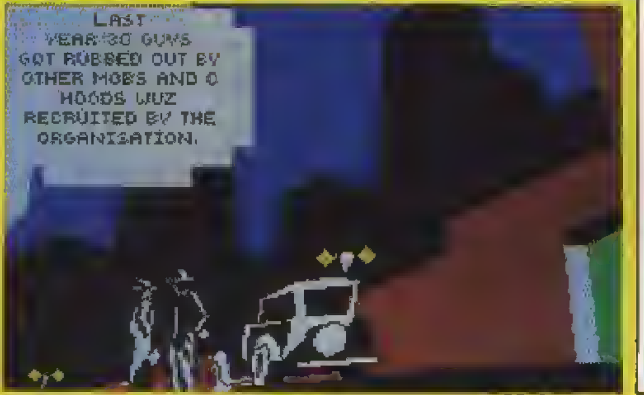
Control keys: a bit of a handful – A or J/D or L run left/right, Q or I/E or P to jump left/right and X or M =down, CAPS or BREAK to fire
Joystick: ZX 2
Keyboard play: difficult with so many keys, joystick recommended, but very responsive
Colour: very good
Graphics: very good, large and detailed
Sound: above average
Skill levels: 1
Lives: 3
Originality: very high, nothing else like it
General rating: amusing, fun, hard and reasonably addictive.

Use of computer	58%
Graphics	83%
Playability	85%
Getting started	78%
Addictive qualities	85%
Originality	88%
Value for money	83%
Overall	80%

Mugsy

Producer: **Melbourne House**
Memory required: **48K**
Retail price: **£6.95**
Language: **machine code**
Authors: **Philip Mitchell, Clive Barrett, Russell Comte**

Mugsy is the first interactive video comic strip. So says the cassette inlay, and they're probably right. *Mugsy* is a strategy type game in which the graphics are the stars. In a sense, what Philip Mitchell and his team have done is to bring graphics to the strategy game in much the same way that they did in *The Hobbit* for the adventure game.

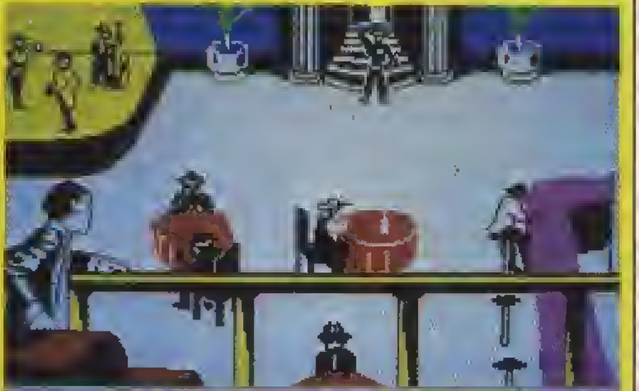

LAST YEAR 30 GUYS GOT RUBBED OUT BY OTHER MOBS AND 0 HOODS WUZ RECRUITED BY THE ORGANISATION.

You play Mugsy, Godfather to a gang of wise-cracking, back-talking hoodlums, and your aim is to be the toughest and most powerful gang leader in the city. To do this, you have to manage the gang by making money and deals, buying them weapons. You must decide how many 'clients' will be protected and how many 'squeezed', make deals with City Hall and play the rackets (no, this is not a tennis simulation). If you are a success your hoods will stay loyal, but if you are too successful one of the other gangs may hire a hit man to get rid of you.

The game is played along much the same lines as any other strategy of its type. But the look is very different. The loading screen sets the tone with its large comic strip graphic of Mugsy's mug. This cuts to a waterfront scene of heavily shadowed hoods staring out over the night time city reflected in the still water. Information is imparted in comic strip balloons – a run down on last year's activities, how many hoods are still loyal and how much dough there is in the safe.

It is then time to begin deciding how much dough to spend and on what to spend it on. In several dynamically drawn scenes, your friendly side-kicked accountant tells you each item and asks for the sum of money you are going to use. There is another comic strip balloon with a flashing asterisk in it. As you input the required figures, so it appears in your balloon.

When these decisions are completed, you are treated to a micro-movie highlight of the year before battle begins again. Should a contract be taken out on you by another gang, the scene cuts to a cafe interior and you have to shoot it out with the hit man.



CRITICISM

- 'A video comic strip eh! Well this is quite a good idea involving you in making decisions and running a mob. The game is quite playable for a few games but soon gets a little repetitive. The graphics are excellent and the animation is also very good (it's only used in places). Generally a good game but it didn't have too much lasting appeal for me. The comic idea is a wonderful one and could be expanded upon to make a more involved and interesting game.'

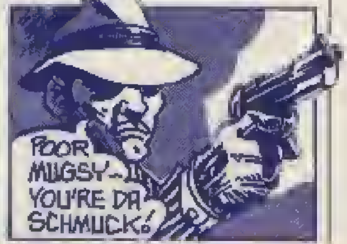
- *'The graphics, which were all done using* Melbourne Draw, *are quite stunning. Not only because they are large, but because they really do look as though they have come from a comic strip. The scenery, the angles from which things are seen, like the overhead view of Mugsy and sidekick walking into a doorway, are all authentic and ower a lot to those 1940s American gangster movies as well as comics. I love the micro-movies – such a pity there aren't more of them. One is a street scene with a street walker passing by the window on the other side of the street. Then a large limo pulls up opposite and someone leans out to fire a burst of machine gun bullets at your window. Unfortunately there really isn't enough to do for the player in the game, as this program largely plays by itself. All you have to do is type in the sums of money to be spent and then sit back and watch the results.'*

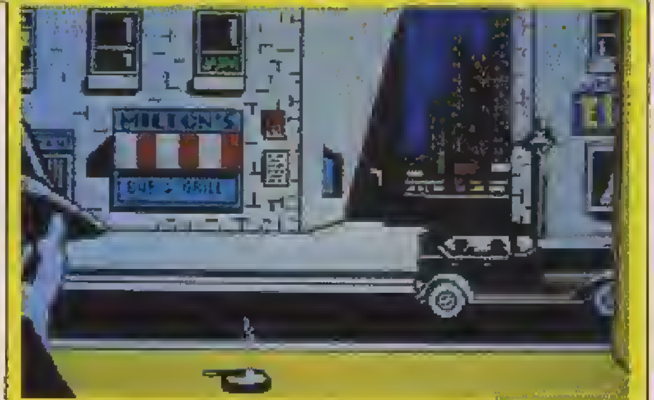
- 'It says stunning graphics on the cassette inlay, and for once its right. The amazing scenes are generated very quickly and the game can be speeded up in the informational sequences by pressing any key as soon as the balloon has been read. The problem I found with *Mugsy* is that it isn't really much of a game as such, and after a few "years" have gone past, you have seen all the pictures there are and it begins to lose interest. What we need now is the graphics of *Mugsy* and the complications of a real teaser like *The Hobbit*. Is it too much to ask? I hope not. *Mugsy* probably is worth buying though, because it certainly looks good.'

COMMENTS

Control keys: (arcade scene) I/P left/right, Q/Z up/down, B, N or M to fire
Use fo colour: very good, comic colours on strong black and white
Graphics: excellent, with some amazing animation
Sound: poor – a very good typical tune, but no sound during play
Skill levels: 1
Lives: 1
General rating: an unusual, original presentation for a somewhat simple strategy game – a game that points the way forward without, perhaps, doing itself enough justice.

Use of computer	68%
Graphics	91%
Playability	76%
Getting started	78%
Addictive qualities	50%
Originality	85%
Value for money	63%
Overall	73%


POOR MUGSY – YOU'RE DA SCHMUCK!



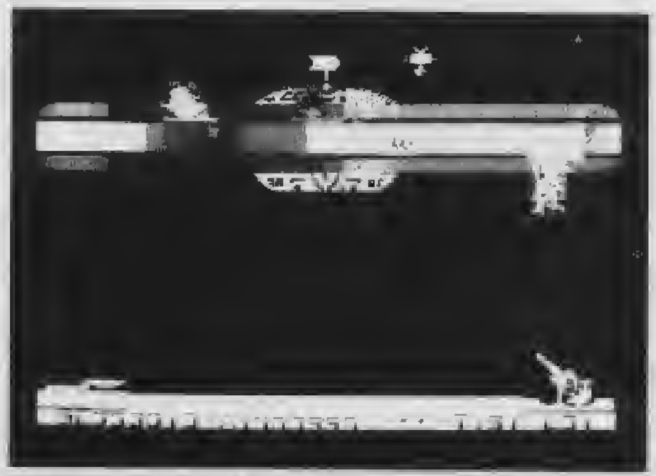
Cosmic Cruiser

Producer: **Imagine**
Memory required: **48K**
Retail price: **5.50**
Language: **machine code**
Author: **Steve Lavache**

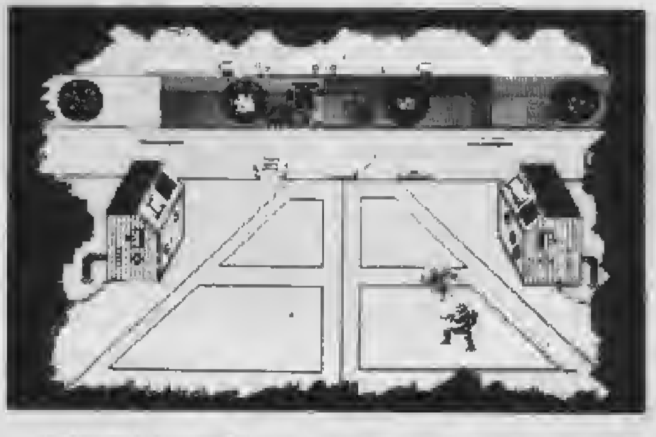
Cosmic Cruiser comes packaged in Imagine's new cassette design with a profile of the programmer and detailed instructions and game objectives.

Essentially you have parked your *Cosmic Cruiser* underneath an Earth-owned space station which has been overrun by aliens. Your task is to rescue the captured crew and bring them to the safety of your Cruiser. Your ship is equipped with a laser canon and a hatch, and you also have a laser hand gun. *Cosmic Cruiser* is not a moving game in the sense that the ships fly about; both your ship and the space station remain static. The object is to shoot open one of the hatches in the station which line a revolving outer wheel. This is done with the canon. You can then fly up to the opened hatch and dive in. The scene cuts to the interior. If you are lucky the compartment will contain a crewman, and after blasting the alien guards, you can drag him to the safety of your ship. But not all the compartments contain crewmen. You will have to kill all the aliens before you can leave. Outside, the aliens are gathering. There may be fighters which will bomb you and the warriors from the station may come after you. Firing the hand gun while carrying a crewman will result in his floating away from you.

Progression from level to level is either by time or by rescuing eight crewmen. Bonus points are awarded after each level. As the levels progress the enemy become nastier.



For the Cosmic Cruiser, getting into the space station proves quite easy . . .



. . . getting out is quite another matter because the aliens give the hero a fit of the jitters.

CRITICISM

● '*Cosmic Cruiser* is, in my opinion, rather similar to Pedro by Imagine in as much as the game is a good idea but generally falls down on playability . Graphics and sound are good, but the graphics do have some problems. But the main problem is the sheer lack of playability. For instance, when inside the space station you must kill off all the aliens to escape. This is difficult due to your man being hard to control and only firing very slowly. This is another good idea gone wrong. Are Imagine going down the same street as that of waning pop groups? Just releasing material and expecting fans to buy it won't work in this industry. Even though I feel this is essentially a 'bad' game, it's 'average' because it is still better than many games available. Imagine just don't seem to get the whole thing working correctly. They brag about their programmers, musicians, artists, techs, etc, let's hope they all work together to give a co-ordinated presentation next time!'

● '*Looking at* Cosmic Cruiser *and, before it,* Pedro, *I begin to suspect that Imagine tried lowering their prices to £3.95 because they thought these games were not worth it, and for £5.50 they're not. The basic idea is quite good, but your man is poorly drawn and very fidgety to control.. He wobbles and bounces off things, is slow compared to the aliens and fires slowly, considering how many of them there are. Inside the space station, the compartments are drawn in a false perspective, but the objects lining the sides cramp the space so much that there is little room left for the man to move away for target distance and he has to be facing the alien to shoot it, so he needs that space. The result is unplayable and very soon completely pointless.'*

● 'I'm afraid the best thing about this game is the title screen and start music. There's precious little sound anywhere else and the graphics, while reasonable to look at, behave very oddly at times. Your laser canon jerks violently in turning, and when you leave it, your man materialises away from it, rather than being animated out. This violence of control runs through the rest of the game too. I think it's totally astonishing that the company to have released a game like *Zzoom* should have let this one go.'

COMMENTS

Control keys: alternate bottom row for left/right, 2nd row down, 3rd row up, top row fire
Joystick: Kempston, ZX 2, Protek, AGF, Fuller
Keyboard play: average responses, but hard to control
Use of colour: good
Graphics: average
Sound: poor (except for start music)
Skill levels: progressive difficulty
Lives: 4
Screens: 2
Originality: not a bad idea, and certainly quite original, but poorly implemented
General rating: below average.

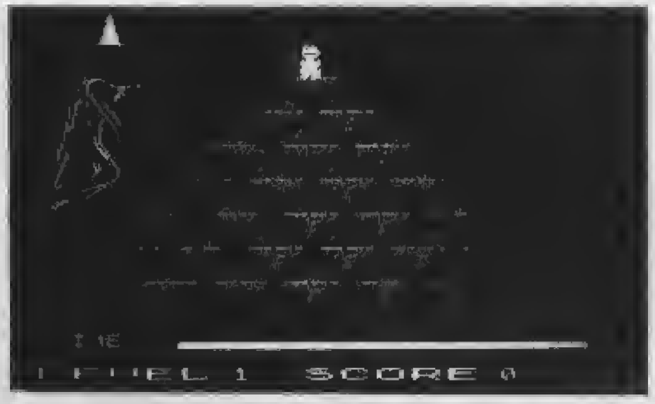
Use of computer	58%
Graphics	62%
Playability	30%
Getting started	74%
Addictive qualities	35%
Originality	68%
Value for money	48%
Overall	54%

Spellbound

Producer: **Beyond**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**

Released at the same time as *Psytron*, *Spellbound* is in a different class, sadly, a somewhat lower one. Dressed in the guise of dungeons and dragons, *Spellbound* is actually a 'Q-bert' game of leaping from square to square to change the colours of a 28 step pyramid.

The scenario is that you (a frog in the disguise of a prince – or is it the other way round?) must escape the clutches of the witch Griselda. She (or is it a he?) stands to the left of the pyramid, stirring her/his cauldron. To do this you must hop about on the pyramid and change the colours of the steps without hopping over any edge, or occupying a square occupied by one of Griselda's spell creatures. These appear on the top square at intervals



Griselda stirring her (or his) cauldron would send shivers down any princeling frog's back.

as she throws them out of the cauldron with a flash of lightning.

There are 12 levels of increasing difficulty, with more and more spells chasing after you.

CRITICISM

● 'This game didn't get off to a good start – pressing the Protek/AGF joystick option resulted in my being asked to program my joystick, so I had to play with a totally unresponsive keyboard instead, as I couldn't get back to the option menu again without reloading. The witch on the side of the screen is realistic as she stirs her cauldron and throws out spells, but the playing characters are small, undetailed and the choice of colour is appalling – you can hardly see some of them. On some screens the change in colours when you jump on the steps is so slight it hardly shows up at all. As this is a 'Q-bert' type game, where have the essential spinning tops to take you up to the top gone?'

● *'At first glance, this "Q-bert" version looks very good, with unusual graphics, a nicely animated witch and muted colours. A lot of sound has also been used, which is nice until you find out that whenever the witch throws a spell out and there is an explosive sort of noise – everything on the pyramid stops dead. Should you be pressing a jump key at the time, the hesitation can make you try pressing it again, with the result that you make two jumps when everything resumes play – and over the edge you may well go. The keyboard responses are the problem with* Spellbound, *and it makes the game less playable and not very addictive.'*

● 'The graphics are rather cute, but the game itself is a little on the slow side, and I really feel that with the recent rush of "Q-bert" type games, there are much better versions around than this one. One factor in *Spellbound* which makes it different, apart from the fairy tale scenario, is the fact that each level is played out against a falling time limit – although be warned – the red segment isn't an indication of imminent death. When you reach the red bit – you're already dead!'

COMMENTS

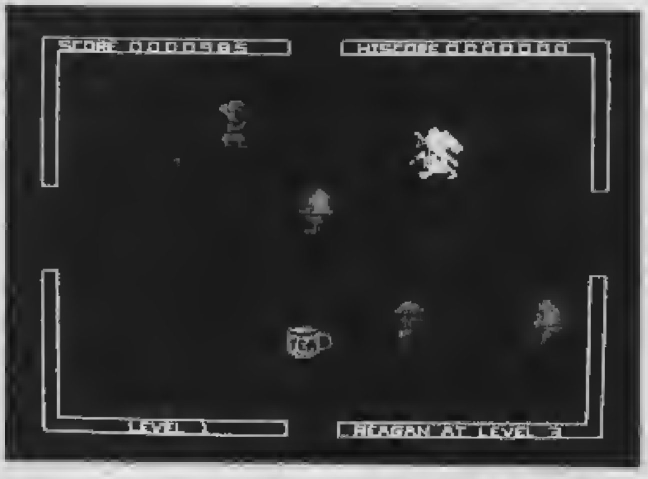
Control keys: Q/P left/right upwards, Z/M left/right downwards
Joystick: ZX 2, Kempston, Protek, AGF, Downsway (has key programming option)
Keyboard play: poor
Use of colour: colours used are varied and good, but not always very well used
Graphics: reasonable, but playing characters are poorer
Sound: good
Skill levels: 12
Lives: 3
Originality: based on arcade game, now several versions available
General rating: interesting variation, but lacking playability due to programming.

Use of computer	54%
Graphics	62%
Playability	43%
Getting started	71%
Addictive qualities	40%
Originality	45%
Value for money	48%
Overall	52%

Airbase Invader

Producer: **CP Software**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Chris Whittington**

Politics seem to be creeping more and more into computer games – so does sexism. The two are firmly combined in this novel idea from CP Software. You play a CND supporter – a female one – and your task is to prevent President Raygun clones, which have been loosed amongst the bunkers beneath USAF airbase Greenham Common, from finding the red nuclear button and blowing the world to kingdom come. The inlay says that hero Annie (is heroine an illegally sexist word now?) has worked her way through the wire and into the complex.



A sweet-hearted heroine blows kisses at all and sundry in an attempt to charm President Raygun away from the red button.

The compelx itself takes the form of numerous rooms (with between two and four doors) on several levels. Stairs up are located at the top of a room, and stairs down at the bottom. Annie, armed with her CND banner, must fight her way through to get rid of Raygun clones. Other characters beset her: Harry Hardnose, gutter-press photographer, Old Bill, the plodding policeman, Squaddies – all Tommies with guns , and worst of all, The Iron Lady herself, neatly depicted as a Tory-blue hairdo.

Annie's politics are all peaceful, however, so she doesn't blast these numerous nasties to bits with anything as vulgar as a laser, instead Annie raises her hand and blows a kiss – it's as lethal as any laser though.. Kisses can only be blown horizontally in the direction faced. In addition, the bunkers are littered with useful objects like maps, secret documents, Hovis loaves and plates, knives and forks. The screen displays the level on which a President Raygun clone may be found and warns if one is about to press the button. Can you find it in time . . . ?

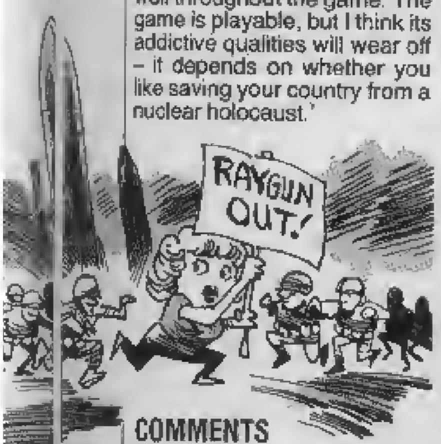
CRITICISM

● 'No comment on the political points in this game! Politics get into everything – I don't want them associated with games! But on the game front this is a lighthearted – until you get to the ominous warning after failing to stop Raygun, which says, 'Remember – if this was real – there wouldn't be a next time.' The graphics are smooth, nicely done and the game is very playable. The Iron Lady looks like something out of SPITTING IMAGE.'

● *'A maze-type complex filled with enemies out to get you is hardly original, but the idea behind this one certainly is. It relies a lot on well drawn, large graphics and some neat semi-political ideas. Blowing kisses to kill off enemies is a good example of its originality in idea, and the concept is well implemented in as much as the Iron Lady is invulnerable to your loving charms! Good fun, and one where a clever idea hasn't swamped good playability.'*

● 'First off I didn't think this was going to be a very active

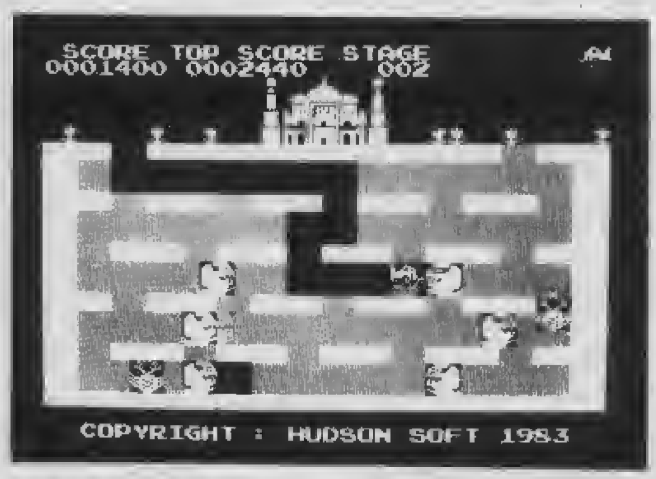
game – wrong again! Characters are drawn exceptionally well, and you can recognise each one. The idea of the game is certainly novel if not realistic. One grumble though is that there's no indication that you've shot the "right" President Raygun, as he keeps cloning – and I'venever found a red button! The idea of "eating" various objects throughout the game like cups of tea, Hovis, etc, to give you extra lives is a good one, as you often get killed off by the nasty geezers who run about the rooms. Graphics are smooth, large and well presented; the keys are not the best positioned I found, as they are all low down (leaves you nothing to lean on) but they are very responsive. Colour and sound have been used quite well throughout the game. The game is playable, but I think its addictive qualities will wear off – it depends on whether you like saving your country from a nuclear holocaust.'



COMMENTS

Control keys: CAPS/Z left/right, X/C up/down, V to blow kisses
Joystick: Kempston, Protek, AGF
Keyboard play: very responsive but poorly positioned
Use of colour: average
Graphics: smooth, large generally good
Sound: useful rather than imaginative
Skill levels: 1
Lives: starting with 3
Originality: a novel concept based on a standard type of game
General rating: above average to good, playable and reasonably addictive.

Use of computer	59%
Graphics	74%
Playability	71%
Getting started	74%
Addictive qualities	61%
Originality	75%
Value for money	62%
Overall	68%



It's icy cold under the threatened Summer Palace in Driller Tanks.

Driller Tanks

Producer: **Sinclair**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Hudson Soft**

Watch out! Emerging from their lairs deep underground the fire-breathing Mammut and their mindless cohorts, the Skorks, are on the rampage. 'Oh' no,' I hear you cry, 'not again!' Never mind – Driller Tanks can prevent them from invading the Summer Palace. The battle takes place in the old tunnel complex beneath the palace. Before the tanks can use their ice-canon and the power of their own weight, they must clear a path through the earth-filled tunnels.

The screen display shows the summer palace to be saved at the top, and below it the complex of earth-filled tunnels. These tunnels are actually five platforms with four or five connecting passages between each level. The driller tank starts each life by drilling its way to the centre before you take over control. The earth is represented by blue colouring, and moving the tank along a passageway results in it turning black. The tank moves faster once a passageway has been cleared.

The mindless Skorks move vertically upwards, filling in any passage you may have cleared. The purple coloured Mammut walk along the passages breathing fire which destroys your tanks. The tanks can fire and freeze a Mammut for a few moments before it unfreezes itself, but if frozen they are vulnerable to your crushing weight and will disintegrate. Scoring is for freezing and crushing Mammuts or freezing Skorks. You are lost if the palace is reached by a Mammut. The game contains eight stages of increasing difficulty.

CRITICISM

- 'This was the worst of Hudson Soft's programs for Sinclair in my opinion. I mean this in the nicest possible way as the game is not really bad, it's just that it did not seem over playable – okay but could have been better. The graphics are fairly good and the smashing of the frozen Mammuts is well done. On the whole I didn't enjoy playing this one, but I would still rate it as above average when compared with games in general.'

- *'Unusual game with unusual graphics, one that is quite playable and where timing needs to be quite precise when freezing Mammuts. I like the idea of Mammuts being able to de-ice your cannon, and the way Skorks can hinder your progress. The graphics are large and quite colourful with a fair amount of primitive animation. There are two sets of key layout for left and right-handed players, although in each the 'freeze' key is a bit out of reach. The start of each new screen or life is quite long-winded, something which quickly becomes irritating. Not for the cold-hearted!'*

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- 'I thought *Driller Tanks* a medium interesting game – quite original in some respects, but somehow not thrilling enough to grab me for more than a few minutes. it hjas reasonable quality graphics and sound and enough difficulty in play to give appeal – but not for long. Very good demo/instructions.'

COMMENTS

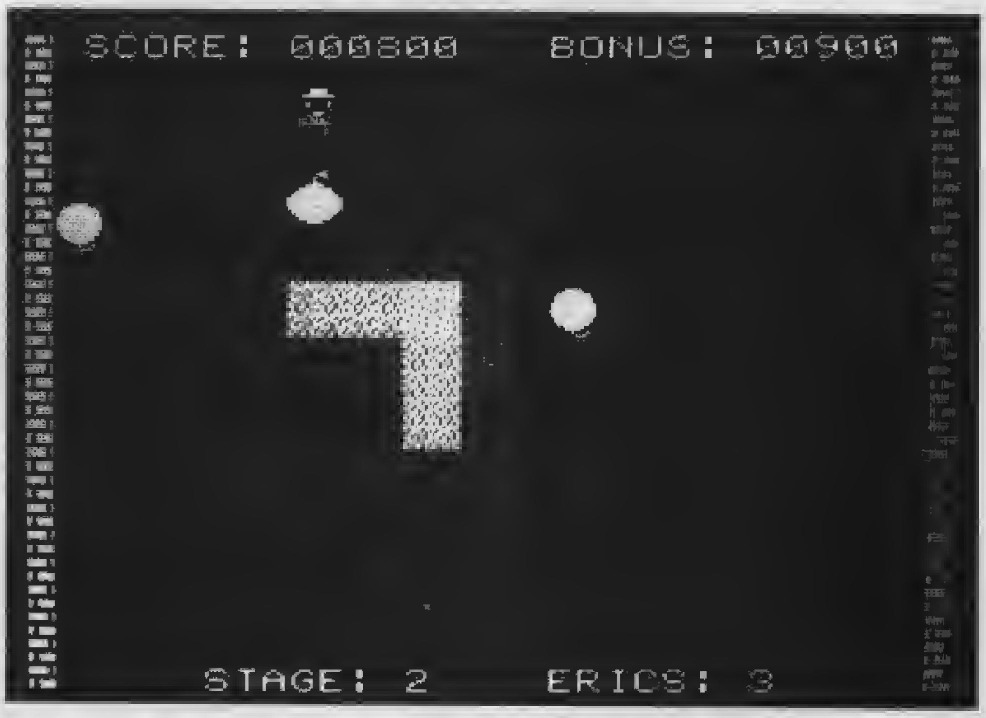
Control keys: A or J/D or L left/right, W or M up/down, SHIFT or SPACE fire
Joystick: ZX 2
Keyboard play: responsive, but not massively good positions
Use of colour: reasonable
Graphics: average, although a little on the primtive, blocky side
Sound: average
Skill levels: 1 but progressive difficulty
Screens: 8 stages
Originality: certainly scores here, the game idea is quite novel
General rating: above average

Use of computer	60%
Graphics	69%
Playability	47%
Getting started	81%
Addictive qualities	45%
Originality	79%
Value for money	53%
Overall	62%

Eric and The Floaters

Producer: **Sinclair**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Hudson Soft**

Eric and The Floaters sounds a bit like a pop group of the mid-Sixties; it also suggests an aerial game of some sort. Both guesses would be wrong, for this new game from Japanese Hudson Soft is an underground maze game. So the story goes: Hidden beneath the rubble of the Brick Lane (wherever they are) are the remains of a lost civilisation. Eric hopes to find part of them by blasting the rubble away with his bombs. But danger lurks in the Lanes, deadly inhabitants of the old system called The Floaters, will kill Eric if they touch him. He must destroy them using his bombs.



When you're lost and alone in a maze filled with Floaters, there's only one thing to do – explode a bomb.

The Floaters are normally purple, but occasionally, like any arcade player, they lose their tempers and get red in the face. In this state they tend to actually hunt Eric down instead of placidly floating around.

The screen display is of a large and reasonably complex maze form, each maze screen being separate. In stage one there is only one Floater, but these increase in number as the game proceeds. Walls may be blasted away by the placing of bombs, especially as sometimes there are totally closed parts to the maze. Objects revealed after the dust has settled may be collected for points by running over them. Once all the floaters have been killed in a stage, the bonus points remaining from the original allowance at the start of the stage are added to your score.

An element of strategy is required in the positioning of the bombs, which leave you about two and a half seconds before they explode. The game has 20 stages, during which the number of hidden items vary.

CRITICISM

- 'This is a fairly original game from Hudson Soft. I liked the general layout and game type. Control was reasonable using the keyboard, but unfortunately Sinclair Interface 2 was the only joystick option. I think this is a little selfish of them. Of course they want to sell their own interface, but not catering for other interface key mapping is just unfair. The graphics were pretty good and the game proved to be "almost" addictive – the joystick option may have tipped the scales against them.'

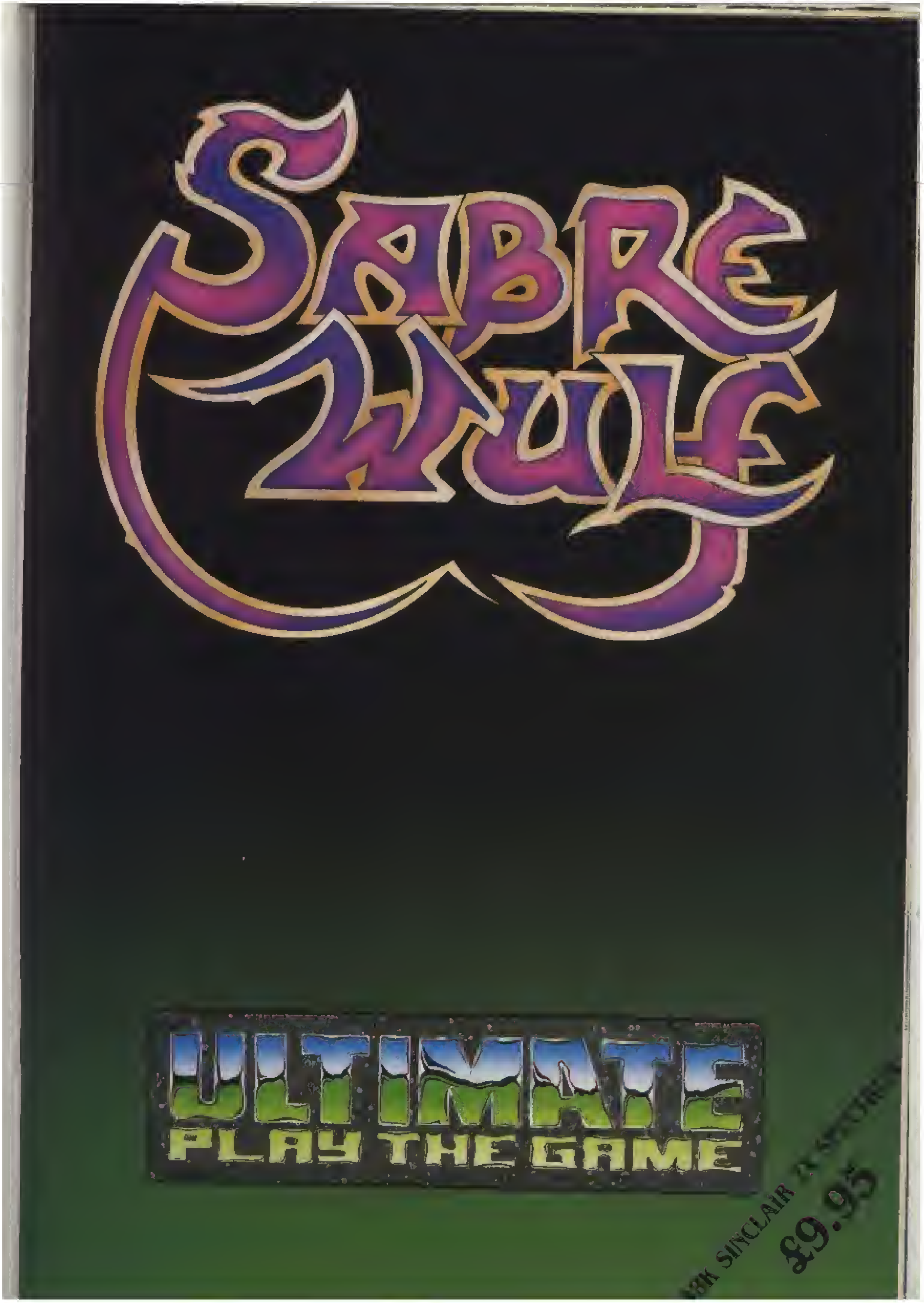
- *'I enjoyed this game rather more than I thought I was going to when I saw it was another maze game. The idea of leaving bombs behind you to explode when you're safely round a corner, and hopefully the floater isn't, is quite original, and makes for a differeent maze game. There is also a kind of Pacman ghost angle in this one too. When there are several floaters after you, it is easy to get trapped in dead ends or between two floaters, so careful escape route planning is needed. When the floaters get "angry" is often the best time because they track you down, so you can lure them to their deaths more easily. Unfortunately the game lacks playability in the end because the keyboard positions are terrible, with a left hand and right hand cross of keys. I've heard the argument that this configuration allows you to use your hand like a joystick, rocking over the keys, but it isn't that easy with the Spectrum keyboard. On a programmable joystick I also found that the control was unresponsive which led to many Eric deaths by being blown up with his own bombs. A pity.'*

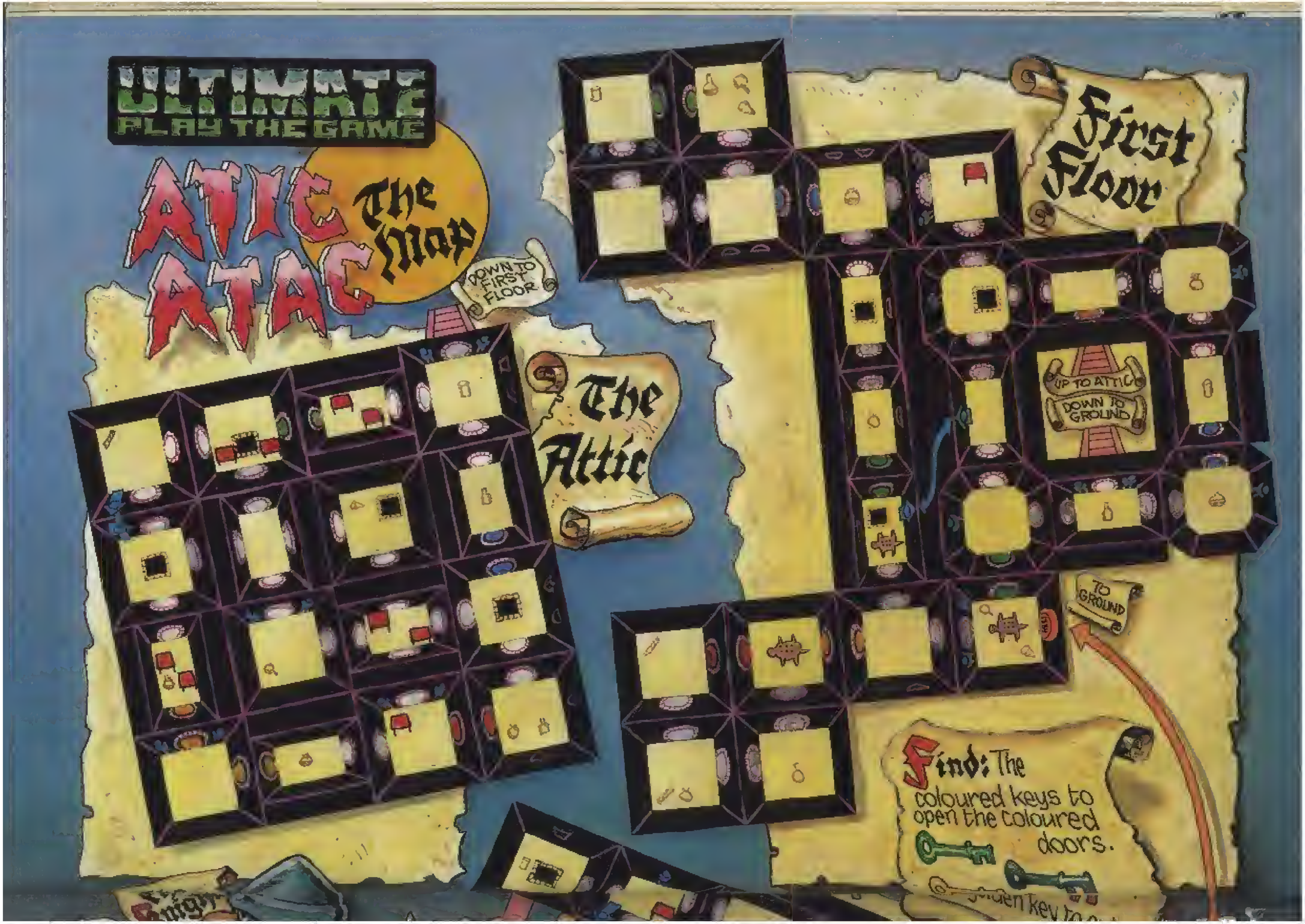
- 'The graphics are quite large but a bit jerky and the overall use of colour is rather drab. The game idea is novel for a maze game but it is spoiled by unresponsive key control. Had it not been for that fact then *Eric and The Floaters* may have been quite addictive.'

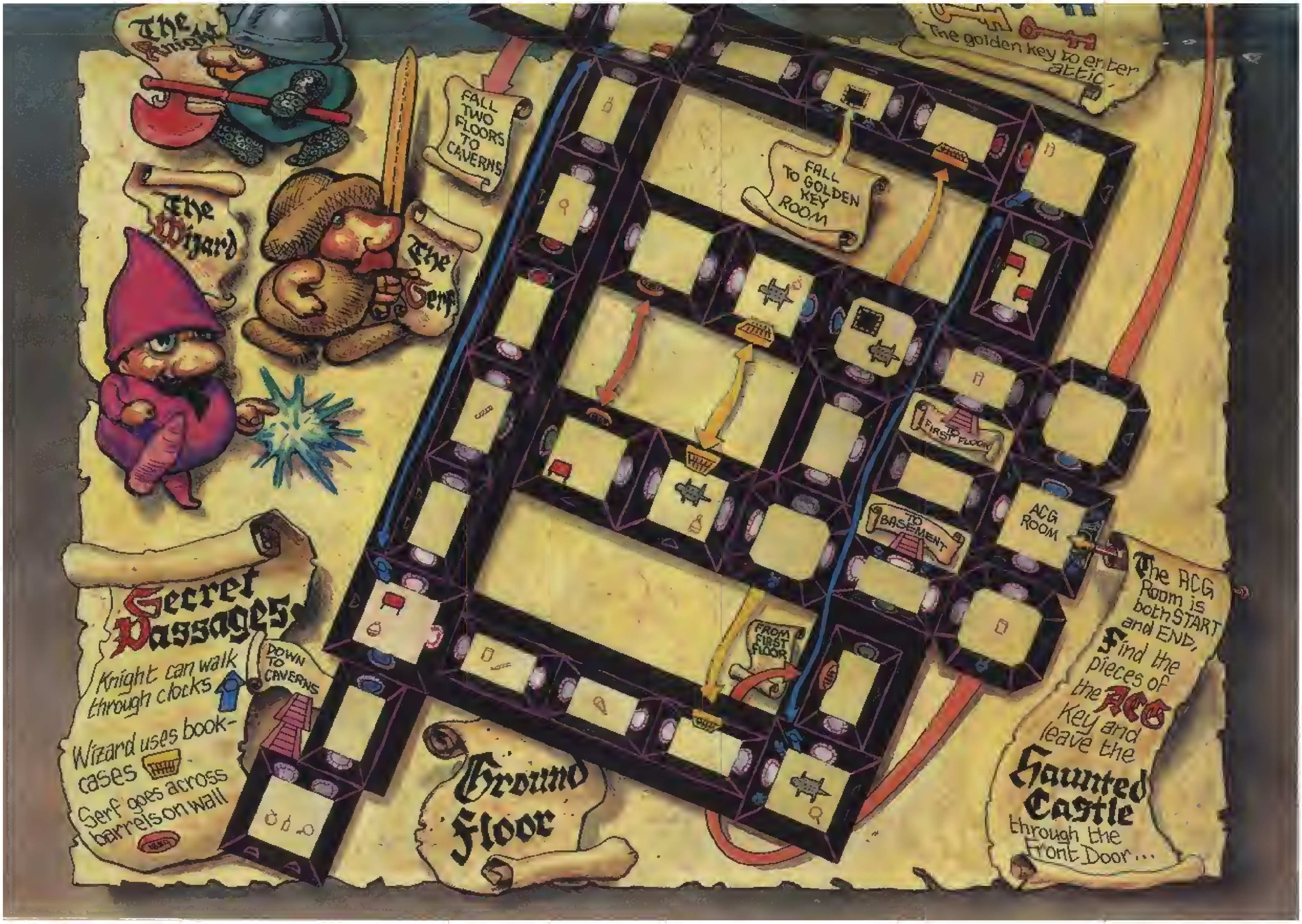
COMMENTS

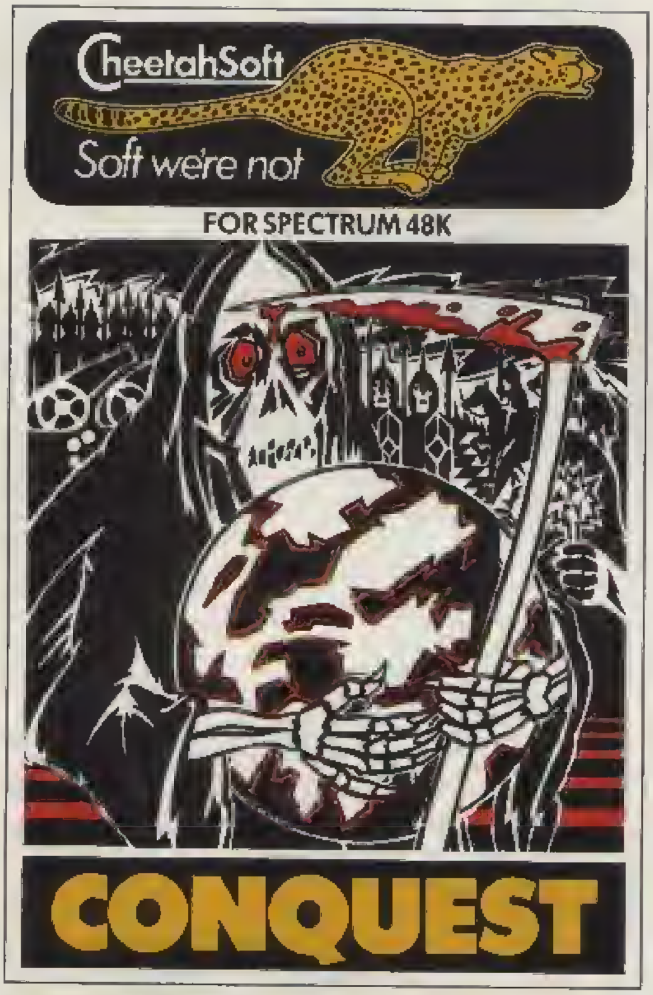
Control keys: A or J/D or L left/right, W or I/X or M up/down, SHIFT or SPACE to drop bomb
Joystick: ZX 2
Keyboard play: awkward key positions
Use of colour: average
Graphics: quite good, a bit jerky but your man 'folds' up well when killed
Sound: above average
Skill levels: 1 but progressive difficulty
Lives: 3
Screens: 20 stages
Originality: maze games aren't new, but this one is a very different theme
General rating: above average.

Use of computer	45%
Graphics	62%
Playability	58%
Getting started	72%
Addictive qualities	58%
Originality	62%
Value for money	64%
Overall	60%


SABRE WULF
ULTIMATE
PLAY THE GAME
8K SINCLAIR ZX SPECTRUM
£9.95


ULTIMATE
PLAY THE GAME
ATIC ATAC
The Map
DOWN TO FIRST FLOOR
The Attic
First Floor
UP TO ATTIC
DOWN TO GROUND
TO GROUND
Find: The coloured keys to open the coloured doors.
olden key to


The Knight
The Wizard
The Serf
FALL TWO FLOORS TO CAVERNS
The golden key to enter attic.
FALL TO GOLDEN KEY ROOM
TO FIRST FLOOR
TO BASEMENT
ACG ROOM
FROM FIRST FLOOR
DOWN TO CAVERNS
Ground Floor
Secret Passages
Knight can walk through clocks
Wizard uses book-cases
Serf goes across barrels on wall
The ACG Room is both START and END, Find the pieces of the ACG Key and leave the Haunted Castle through the Front Door...



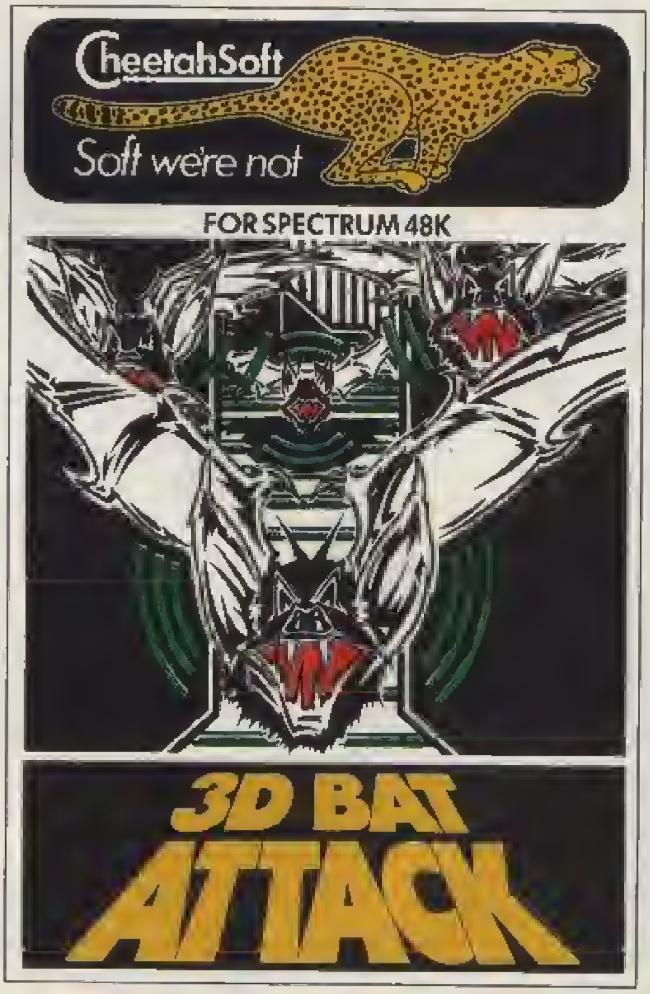
CONQUEST A tactical game which even veteran players will find both challenging and rewarding.

Mediterranean Europe is divided into grid squares. Your aim, as Emperor, is to gain 100 squares of territory as quickly as possible – at the same time dealing with Barbarian counter-attacks, plagues, civil war and rival Emperors.

5 levels of skill, plus a continuous 'Conquest' game where all the difficulty levels are thrown in together.

3D BAT ATTACK An all action, 3 dimensional maze game where you gather up blocks of gold, at the same time pitting your wits against vicious vampire bats whose only purpose in life is to locate, hunt and kill you.

4 levels of skill. At each level the game gets faster and more complicated, and the vampires more dangerous.



AFTER THESE, THE REST IS KIDS STUFF.

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There's only one way to find out. But be warned: these vampire bats know a good meal when they see one. And our friend with the scythe has had years of experience . . .

So don't play unless you're ready to play the game for real. Because you'll find there's one sure thing about CheetahSoft: Soft we're not.

CheetahSoft
Soft we're not

£6.95 at all good stores.

The Prize

Producer: Arcade
Memory required 48K
Retail price: **£5.50**
Language: **machine code**

This game takes its name from the fact that Arcade Software are offering a prize of £5,000 to the first person to locate the innermost chamber of a massive maze and discover its secret.

You are in control of a space ship armed with laser torpedoes to be used against the various guardians in the maze. These include Death Drones, Mutants with vulnerable parts which you must discover as they won't just die by being shot anywhere, and Crushers, large ladder shaped objects that work in threes and which kill on contact – and keep on killing!

On each level of the maze there are energy bases which charge your ship so that it can withstand contact by the guardians and destroy them instantly. Once charged, the ship alters colour and will remain in this super-state for a random time. Time running out is indicated by the force field flashing. Whilst in this stage also, you can search for the coded pods to aid your progression to the next level. The pods are numbered 1 to 5, 5 being the transporter pod. These must be collected in the correct numerical order.

Photographing the special code off the screen on level 4 is required for entry into the competition for The Prize.

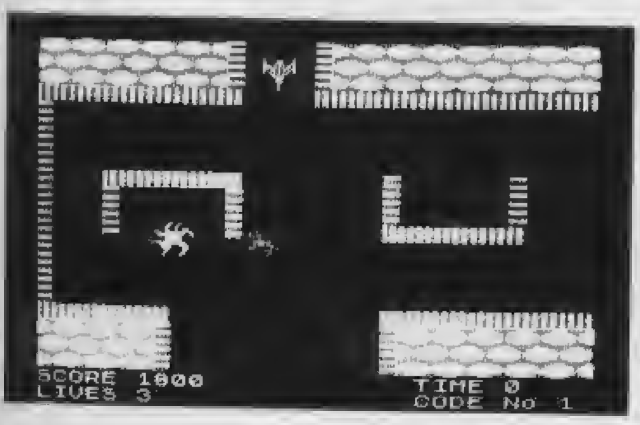
CRITICISM

- 'This is a huge maze game with each 'chamber' taking up one screen – I don't know how many there are (perhaps that's the secret at the centre), but there are a lot. Graphics are well animated, parts of the guardians moving within themselves. Different aliens have different firing techniques to try and destroy you. Colour shading for the walls of the chambers is used very well, and is quite varied. Keyboard layout (only the cursors) is not so good, but the keys are very responsive. Finding your way around this maze is a considerable task – never mind finding numbered pods. An a-mazing game with an incentive of £5,000.'

- 'The Prize *is nothing special as games go except for its sheer size and the fact that the graphics are of a high standard. The aliens are very variable, well animated and imaginative in design. The way they behave is also varied, and it's a nice touch that on clearing a chamber and entering another only to find it packed so that you retreat back the way you came, you find the once empty chamber you originally left is now packed again. That sort of mistake can cost lives! The game keeps you busy which gives it its addictive qualities. I must say, I enjoyed playing this game.*'

- 'At last Arcade have brought out a game that is addictive to play and not just graphically pleasing. The game has several difficulty factors built in – the Crushers are particularly hard to get past, requiring nerve and some skill in timing. I also enjoyed the energy base idea. This not only looks quite effective as it charges your ship up, but it also gives you a few moments of carefree fun as you charge where you like, sweeping everything before you. Colour is well used throughout the game, especially in the solid areas behind the edging walls, and the graphics are large and move smoothly. Quite an addictive game.'

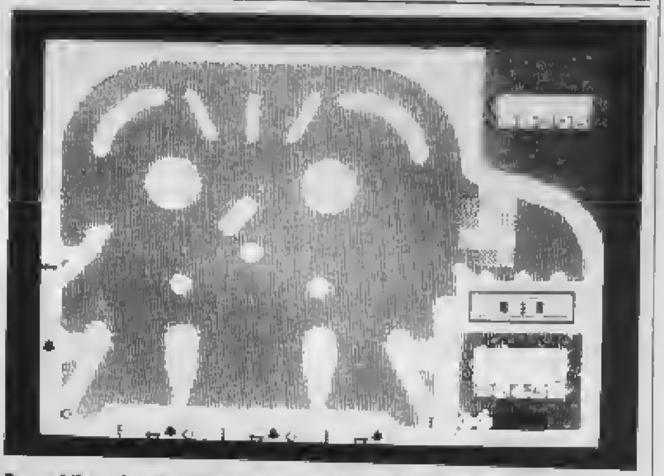
There's a lot of money at stake in the mammoth maze shoot 'em up – in fact, it's quite a Prize.



COMMENTS

Control keys: cursors
Joystick: Kempston, AGF and Protek
Keyboard play: responsive, though made harder by use of cursors, and generally better with a joystick
Use of colour: very good
Graphics: good
Sound: above average
Lives: 5
Originality: standard giant maze type game
Generating rating: fairly addictive, playable and with good incentive.

Use of computer	60%
Graphics	82%
Playability	75%
Getting started	69%
Addictive qualities	70%
Originality	55%
Value for money	69%
Overall	69%



Resembling a bewildered walrus on the telephone – Zipper Flipper.

Zipper Flipper

Producer: **Sinclair**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **R.E.D/Sunshine**

'It's late at night – the cafe's crowded – and the music's playing loud. The hunt is on for a pinball wizard – the one who can master the rolling ball. It takes lightning relfexes to master the *Zipper Flipper* and it's your turn to play . . .'

So says the insert. So, as you may imagine, *Zipper Flipper* is a pinball game, and you may have already discovered the *Pinball Wizard* – that was by CP Software. The principle difference between this and the CP Software game (apart from the graphics) is that *Zipper Flipper* also includes a fruit machine – not as a separate game, but as a part of the table.

The actual playing table looks a little like a surprised walrus with a telephone to its ear (or perhaps a steam radio, whichever you prefer). It eyes are the two main central bumpers with channels above for eyebrows and vertical channels for worry lines. Below, there are three smaller bumpers for a nose and the two flippers for projecting teeth. The telephone bit is the area containing the fruit machine.. This is protected from the main table by three rows of multicoloured bricks. Each time a ball hits a brick it is knocked out. Should you breach the wall entirely, your ball may land in the fruit machine, which can then be nudged for a bonus score.

Between one and five players can enjoy the game, and a menu option provides for the setting up of a competition.

CRITICISM

- 'The graphics in *Zipper Flipper* are good but rather

▶

unexciting. The movement of the ball is very good, smooth and convincing – it even appears to spin as it rolls. But the main drawback is the fact that layout and content are unexciting. Anyone who has played real pinball will remember all sorts of features that aren't here. On the other hand it does include the novel feature of a fruit machine. I didn't like the somewhat unconventional flippers though. Generally good, but could have been more exciting with a few more features.'

● *'Whether you will like this game or not probably depends on how much you like table game simulations. Pinball is one of those things which the computer can do rather well. I didn't think this version was anything I like as good as the* CP Software Pinball Wizard *because it lacks the lively colour of that one, as well as many of the traditional bumper features. Also, the linked flippers were a bit sluggish I thought. The addition of the fruit machine is interesting, but I don't know whether it actually adds much to the fun of playing. The balls do roll about very realistically, and the addition of a small black cross on them allows for a good spinning feel to it. If it's addictive that's because of the pinball idea rather than the game. Not a bad version, but I preferred* Pinball Wizard.'

● 'The main attraction of pinball is all the colour, noise and numerous bumpers. This lacks in all respects as the colour is a bit drab and the table layout isn't particularly exciting. Nevertheless, the graphics are very good and I enjoyed playing it.'

COMMENTS

Control keys: left hand keys flip left, right hand keys flip right, 1-5 lowers plunger, 6-0 raises plunger, ENTER to fire and nudge
Joystick: ZX 2
Keyboard play: responsive, although flippers a bit sluggish
Use of colour: well used, but rather drab looking
Graphics: neat and excellent spinning ball
Sound: realistic ball pings, but nothing else much
Skill levels: 1
Lives: 5 balls
Features: 1 to 5 player games
Originality: as it's a copy of a real game, obviously not very high
General rating: a reasonable implementation, but not overly exciting.

Use of computer	70%
Graphics	65%
Playability	58%
Getting started	63%
Addictive qualities	58%
Originality	43%
Value for money	60%
Overall	60%

Carpet Capers

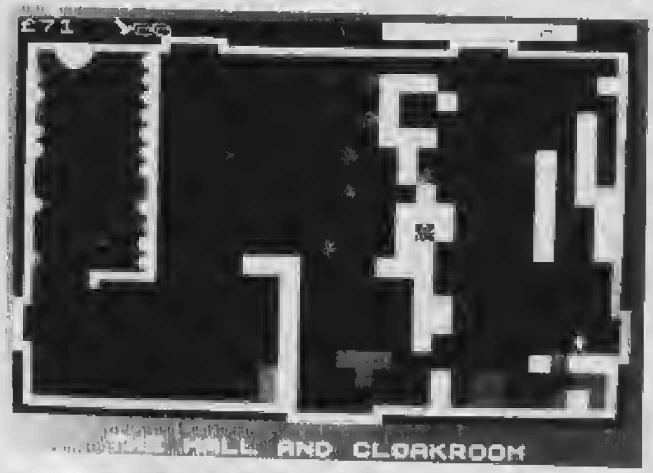
Producer: **Terminal**
Memory required: **48K**
Retail price: **£6.95**
Language: **machine code**

This is a game about deranged carpet fitters. The screen depicts the plan of a very large room with several exits. The object is to cover the room with white carpet, of which you have an unlimited stock. The main problems come in the form of your apprentice – who's absolutely nuts and should be locked up – and rival firms of fitters who have also been asked to do the job.

Lying about the room are various useful implements like tacks and cutters and a hammer; as well as the essential key (without which you cannot leave a room). There is also food around, which must be eaten if you aren't to starve to death.

Your apprentice goes about eating all the food and picking up all the useful objects as well as removing your carpet as fast as you lay it. As a target is set and must be reached before you can leave the room, if you've got the key, and score points for squares of carpet laid, you must keep well ahead of the apprentice's depradations. Another problem is that you cannot walk over cleanly laid carpet, so it's easy to get trapped. One way out is to drop two objects if you have them and spoil the square, which lets you out. Alternatively you will have to wait until the idiot catches up and remvoes a square to let you out.

You will be stopped from laying carpet if you run out of tacks or use up hammers and cutters. Escaping from a room through the correct exit leads you into another room. There are nine in all, each with their own spatial problems and rival carpet fitters.



assistants and deranged carpet fitters jitterbug their way through hall after hall.

CRITICISM

● 'First glance at the cover and I thought this was going to be a great game – and I was wrong for the second time in one day! It just goes to show how a great looking cover an fool you into buying a game that turns out to be rubbish. This is the sort of game that you might have bought when the Spectrum was first introduced. I hated it.'

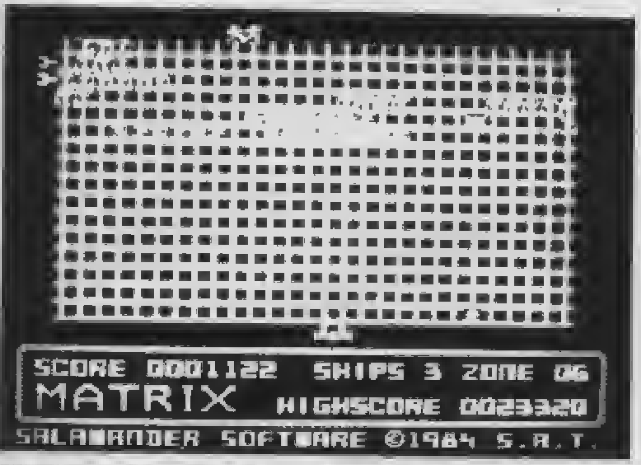
● *'The idea is certainly an interesting one, and* Carpet Capers *could have been a winner – except for a number of problems. The graphics are very primitive; you, your apprentice and the rival fitters are tiny squares with an outline of a man in them. They all jigger about the place in an uncontrolled manner, and it takes a long while to figure out what the hell is going on. When you do, you realise it really isn't worth it. I'm astonished that a game that looks like this one should have been released as new these days.'*

● 'About the only thing written on the cassette inlay that turns out to be true is the warning about TVs interfering and stopping proper loading of the program. It claims (elsewhere) that the graphics are, "Hi-res flicker free graphics" and that the screens are, "FAST machine code action." Well, compiled machine code action maybe – they're certainly not what I would call fast, and no one could claim they were flicker free unless they were blind. The idea behind the game sounds quite good, a sort of updated "Painter" type, but it's hard to enjoy a game that has such poor playability and uncontrollable, poorly designed graphics.'

COMMENTS

Control keys: very badly placed in a straight line – O/P left/right, Q/W down/up, SPACE for drop
Joystick: joystick option mentioned but not stated which
Keyboard play: uncontrollable, and terrible keyboard layout
Use of colour: average
Graphics: primitive
Sound: fair, repetitive and unimaginative
Skill levels: 1
Lives: you only die once
Originality: a possibly good idea obscured by a bad game
General rating: waste of money.

Use of computer	15%
Graphics	19%
Playability	2%
Getting started	34%
Addictive qualities	1%
Originality	N/A
Value for money	10%
Overall	14%


SCORE 0001122 SHIPS 3 ZONE 06
MATRIX HIGHSCORE 0023320
SALAMANDER SOFTWARE ©1984 S.A.T.

The Grid Wars are back – can you stay alive on on the grid with Zappers, Snitches and Camels?

Matrix

Producer: **Salamander Software**
Memory required: **48K**
Retail price: **£6.95**
Language: **machine code**
Author: **Jeff Minter**

In our earliest issue we reviewed *Gridrunner* by Jeff Minter. This new game is subtitled *Gridrunner 2*.

It is ten years since the terrible Grid Wars shook humanity (*Gridrunner*) and now the terrible Droids have returned – and they are not alone. The droids now drop bombs at crazy angles and generate force fields which deflect fire, sometimes straight back at you. They also have a psychological weapon, which makes the pilot think he's seeing camels running down the grid. Your mission is to defend 20 sectors of the Grid.

The grid is tastefully designed to be easy on the eye for once – dark blue squares on a black background. The droids come down the screen, zig-zagging left to right, and, when hit, break their chain, the damaged segment forming a pod. They may drop bombs, and when reaching the base of the screen, begin to move diagonally. A pod will remain after forming until it has been blasted to smithereens, or until it has mutated into something nastier, in which case it will fall down the grid on top of you.

To the left of the grid, and along the bottom, there are two Zappers. These move back and forth, firing into the screen. Where their beams meet they form a pod. The beam from the base Zapper is deadly. If the sntich is above you and the Zapper below, the Zapper will fire out of sequence and get you. Some screens have deflecors, big screens in the centre which deflect your shots.. Cosmic Cameloids appear on their own and with droids. On their own they decrease your score while they're on the screen, but with droids they are harmless, although they get in the way.

CRITICISM

- 'I feel this is a good game. It doesn't have the most exciting graphics I have ever seen, but the game makes up for that. I found it very playable and relatively addictive. My main grumble is that after every game the menu returns to the keyboard option. This is rather annoying when one does not notice or forgets to select the required option. Perhaps on the pricey side at almost £7 – let's not have the Commodore people trying to increase the price of Spectrum software!'

- *'This game is a cross between a "Centipede' and "Grid" game but it's ,much speedier.' Graphics are small and quite uninteresting and fly about so fast that you can't concentrate on them or see them. Colour has not been used to the computer's full capacity, but the explosions are quite neat. Basically, I think there's much too much going on in the game all at once for it to be very playable or addictive – although some arcade mutations might be able to cope.'*

- 'Centipede meets grid for the second time. I found this newer version more fun to play than *Gridrunner* because the droids do more, but the camels just seem to be there for the in-joke quality rather than any useful game reason. again, the graphics are tiny and the game is super fast. I like the fact that you can enter any level between 1 and 6 and the snitch on the top keeps you on your toes more. But much after level 7 it all becomes very hard, with two drois and everything else happening at once.'

COMMENTS

Control keys: I/P left/right, Q/A up/down and O to fire
Joystick: Kempston, AGF and Protek
Keyboard play: quite good positions, very responsive
Use of colour: average, good use of contrast
Sound: fair to average
Skill levels: 20
Lives: 5
Originality: new features to make an old game more complex
General rating: Good if you like very fast grid games.

Use of computer	57%
Graphics	51%
Playability	64%
Getting started	80%
Addictive qualities	55%
Originality	58%
Value for money	52%
Overall	**60%**

Psi-Spy

Producer: **Postern**
Memory required: **48K**
Retail price: **£7.95**
Language: **machine code**

Psi-Spy is a sort of 3D adventure/arcade game which takes place under the purple dust of the Wandering Planet where, it is rumoured, exists the Labyrinth, a remnant of the once great civilisation of the Overlords. Great wealth and high adventure are promised all those ready to challenge the still active Guardians and find the five keys of Zar, without which exit from the Labyrinth is impossible.

The game comes with a very complex set of instructions, without which it is impossible to get into the Labyrinth, let alone leave it. The game starts off outside the main entrance with its lowered portcullis. There are flashing detectors which alert a Guardian, who will come and chase after you as you try to collect the anicent Rings of power.

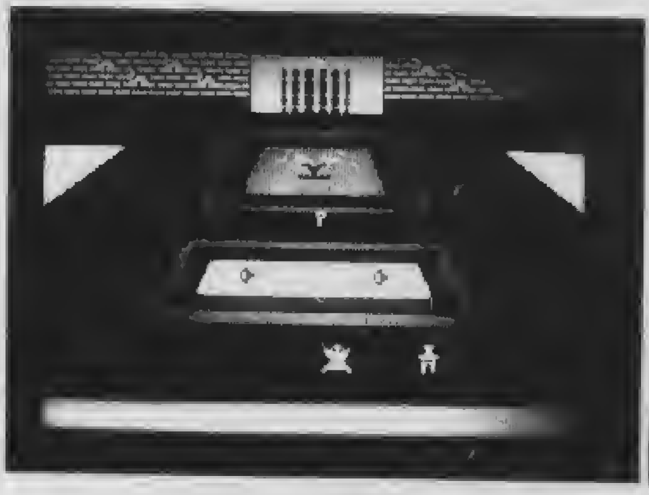
Once inside, the game becomes a maze of interlinked rooms, most of which are protected by guards. The guards must be killed before an object can be picked up. In this stage screen commands will activate the game; these are TAKE and FIGHT. In addition you can have spells, a tachyon gun (if you have the ammo), use tax returns in bargaining and there are brain bugs which work against intelligence (not surprisingly perhaps!).

The 3D in stage one is drawn with a strong perpsective, and the guard alters in size depending on his position. In the latter stages, the rooms are shown as walls in perspective from above. Screen commands do not have to be typed in, but are accessed through single numeric key presses.

CRITICISM

- 'My review of this game is necessarily short because it almost completedly failed to work. I have to admit that even with the complicated instructions I couldn't understand a thing that was going on. In fact I was so worried about my shortcomings as a Psi-Spy that I got in a few friends to see if they could make head or tail of events. In the end we did manage to suss out some things, but I'm at a loss to explain any

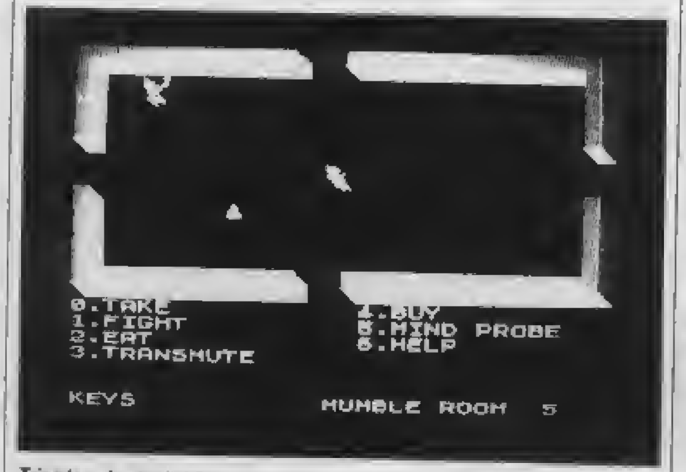
Try to get in – Psi-Spy.



of them. No doubt it's a worthy effort to cross arcade with adventure, but does it all have to be so damned complicated? Certainly a serious problem is that you have to think and act fast and there are a lot of keys to use. May be wonderful if you like a headache but I couldn't get on with it at all.'

● *'After playing this game several times and for a couple of hours at least, I still haven't really found out what I'm meant to be doing, despite the long instructions. An attempt has been made to produce a 3D arcade adventure which has totally failed. Because of its complicated obscurity any playability the game might have had has been spoiled. The graphics move smoothly, quickly, but are not at all well drawn. A lot of them are small and undetailed and none of them are very colourful. Currah Micospeech facility has been used quite well and has been backed up by a text which explains what it's saying, so you don't have to try and work it out!'*

● 'In the first screen, the object seems to be to get the portcullis open and get inside. The gate seems to open at odd moments quite unrelated to what you are doing. Also the guardians have a distinct advantage because they really do move very fast, sometimes even superfast. I say the object seems to be to get the gate open, but in fact the easiest way in is to get killed by the guardian. This is typical of the way the game has been designed to confuse. In my opinion it is unplayable, although the keys are well used and responsive, the graphics are adequate, and there is obviously an idea in there somewhere trying to get out.'



Tring to get out – Psi Spy.

COMMENTS

Control keys: A/D left/right, L/SYM up or away/down or towards plus numerics for screen commands
Joystick: none
Keyboard play: sensible positions, responsive
Use of colour: average
Graphics: smooth but undetailed, not very large
Sound: hardly any without Microspeech, busy with
Skill levels: modified throughout according to status
Lives: 1
Originality: original but confusing
General rating: fair, very hard to play and a bit pricey.

Use of computer	58%
Graphics	57%
Playability	32%
Getting started	54%
Addictive qualities	25%
Originality	60%
Value for money	45%
Overall	47%

Sabre Wulf

Producer: **Ultimate**
Memory required: **48K**
Retail price: **£9.95**
Language: **machine code**

In most respects this is probably the most redundant review in this issue! By the time you read it, it would be surprising if you aren't already an expert at playing *Sabre Wulf*, the latest game from Ultimate. Due to the inevitability of the natural law which states: Ultimate will always release a new game at the last possible moment before CRASH goes to press – we have had to do this one backwards in order to get any colour pictures fitted in! So below you will find the criticisms, and on the opposite page the general bits and pieces with the pictures.

CRITICISM

● 'After waiting a week in a state of extreme anxiety for the phone call to say, "IT'S HERE!" I almost fainted when it came. Then came the blow. They told me I only had two hours to get it reviewed! But it takes almost that long to load! In two hours, all you can do is run around like mad, try and stay alive and explore the countryside. Or rather the jungleside. I did get to see natives, spiders, scorpions, lively and sleepy hippos, dancing flames and I picked up all sorts of things. I also saw lakes and mountains and got chased by the Wulf or a wulf anyway. As to how the game plays, it is going to take longer, but the graphics are fabulous – detailed, colourful, varied, extremely well animated and very fast. The sound is great too. After a short time I am convinced it's better than *Atic Atac*. Time will tell. Pity about the steep price increase, but I think the game is worth the money.'

● *'In my opinion this is "state of the art" Spectrum software. It's basically a jungle version of* Atic Atac *but much more involved (and better too). The graphics are superb and extremely colourful. 'Many animals are to be found and there are lots of game features. I felt that I had travelled for miles yet only attained 25% – Indiana Jones eat your heart out! On the subject of aims, Ultimate have included an inscription or warning. After some thought I took it to mean: get the four parts of the amulet an escape through the cave (without the amulet you cannot leave). I have two main criticisms, neither of them very serious. (1) Occasionally on two-player games with a Kempston, I was unable to move upwards until several lives had been lost. (2) The price of £9.95 is a steep increase from £5.50. Even so, I would still recommend it to anyone. It's worth almost any two £5.50 games on the market. But I wonder whether this increase will mean an increase in its piracy. (In a plea to pirates I would like to say that their actions could mean that high-quality software such as this may tend to decrease!) As a final opinion all I am going to say is that this is a Software Masterpiece (anything less would be a gross understatement). Thanks, Ultimate.'*

● '*Sabre Wulf* takes Atic Atac further. There is the search, the far from friendly creatures, the central mystery of what does what – but there is just a lot more of it. I managed in the short time allowed to get down to the bottom where you can see the mountains, passed the Wulf (who is much faster than you, don't try to outrun him) and to the side mountains where I found I could leave the jungle and run along the mountain tops. Much further, though, is going to need more time! Fab graphics and sound, brill colours – words fail. It's the game that counts – play the game.'

COMMENTS

Control keys: Ultimate's famous QWERT combination
Joystick: Kempston, Sinclair 2, Protek, AGF
Keyboard play: very responsive
Use of colour: excellent
Graphics: excellent
Sound: excellent
Features: one or two-player games
Originality: top marks
General rating: despite a price increase, still good value. Probably Ultimate's best game to date.

Ratings: At short notice it has been difficult to give an actual rating for *Sabre Wulf* that would make sense, and it's probably redundant anyway. Let's just say **'unrateable!'** and leave it to you to decide.

A Crash Smash

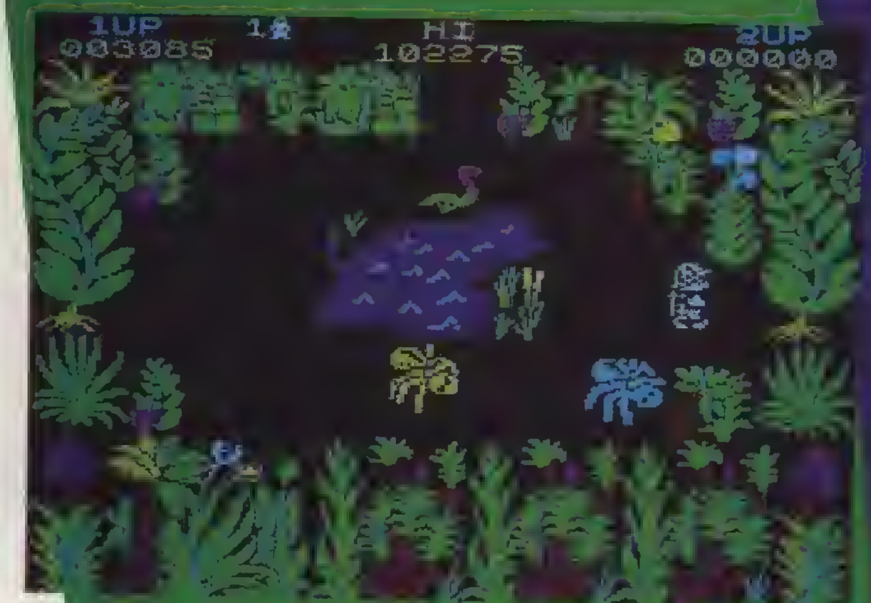
S·A·B·R·E W·U·L·F

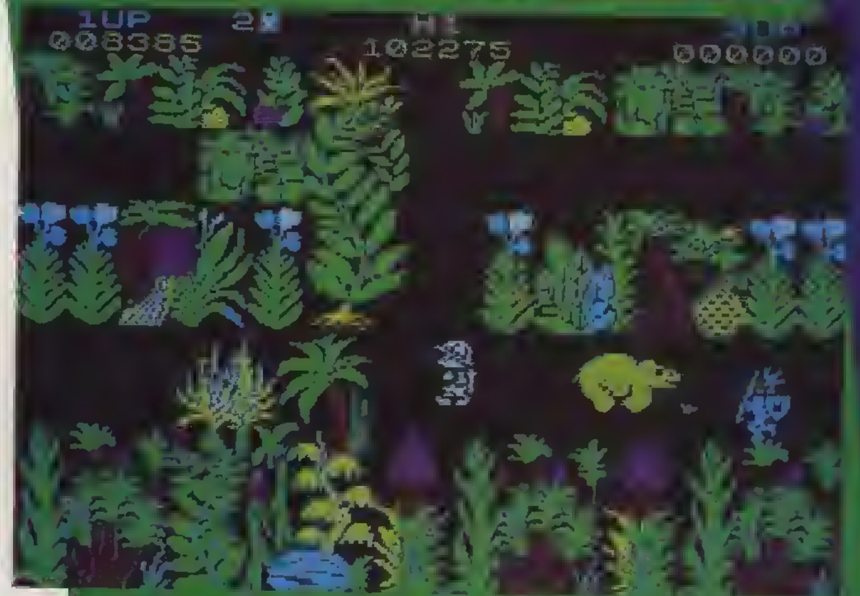
It is, perhaps, almost redundant making an **Ultimate** game a **CRASH SMASH**. From the moment the first ad for *Sabre Wulf* appeared, the question we have heard most is, 'Is it out yet?' Those rumours which suggested that *Sabre Wulf* would be like *Atic Atac* are, in many ways, correct. What we have here is another Ultimate mystery with a glossy, cryptic scenario, a long cast list of the horrors to be encountered, and very little else. As in *Atic Atac*, the player is expected to explore, discover and die endlessly until things begin to slot into place. Also as in *Atic Atac*, the game plays in a massive maze where at any moment you will be able to see a place you would like to reach and no obvious way of getting there.

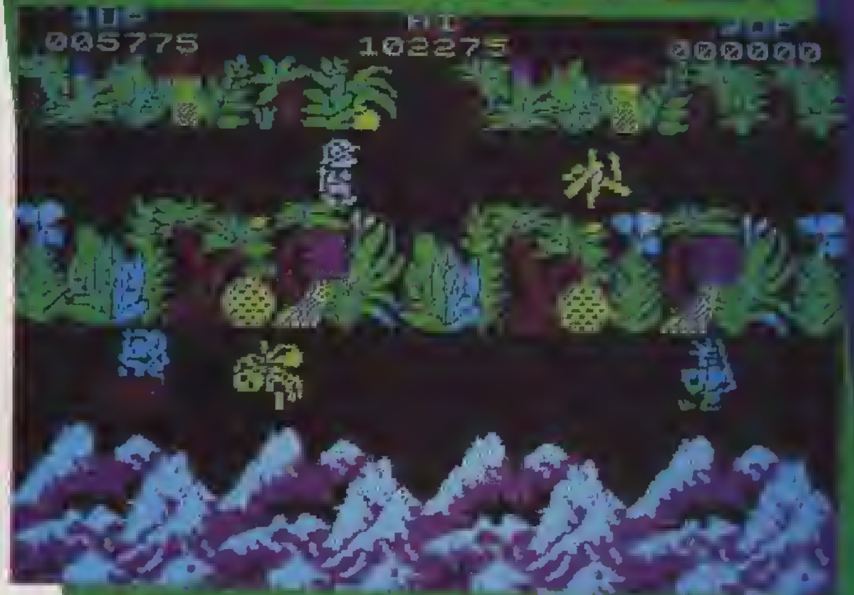
Unlike *Atic Atac* there is no pickup/drop key, and consequently no info box to tell you what you are carrying or how strong you are. This deepens the mystery. How are you to know whether you are on the right track? (Forgive the maze-like pun.) The only starting point is the dire WARNING etched deep into lifeless stone and reprinted on the insert. Put together the four sundered pieces of what must be an ACG Amulet so you can pass the keeper wrought with hate and gain an entrance to the gate.

Any review of *Sabre Wulf* at this point could only scratch the surface of the game's complexity. But it's safe to say that, like *Atic Atac*, it will endure.

What we do have immediately is a glowing screen full of colour, intricately drawn graphics, constant animation and action and a desperate desire to get on with it and find out what's going on in this tangled jungle world. Ultimate are very good at designing games without explanation or hint, but at providing enough clues in the action itself for you to try out things. In this sense both *Atic Atac* and *Sabre Wulf* are really like graphic adventures. It is up to you, the player, to find solutions to the problems. The very fact that the problems exist is a guarantee that there will be a solution – if only you can discover the right combination of events.







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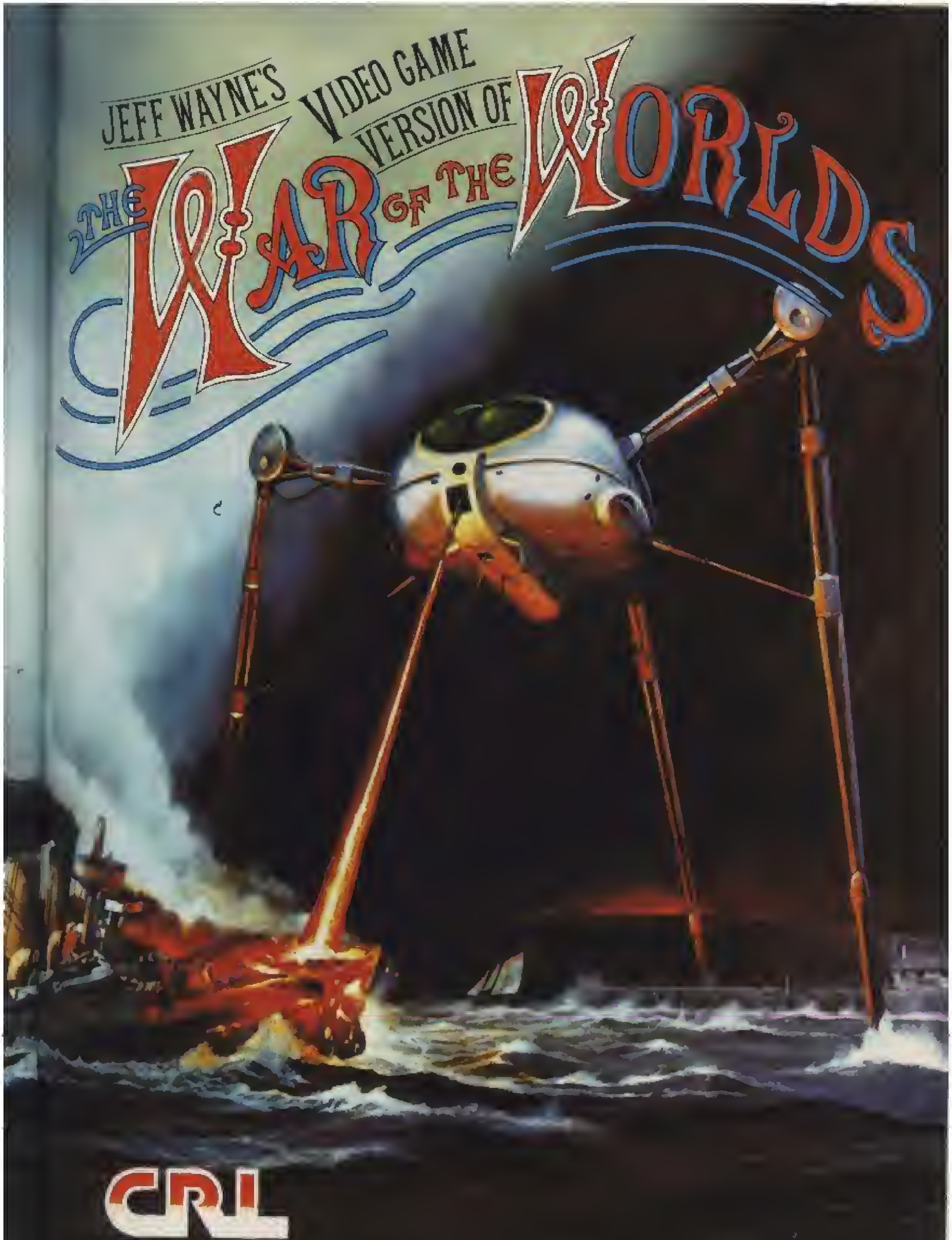
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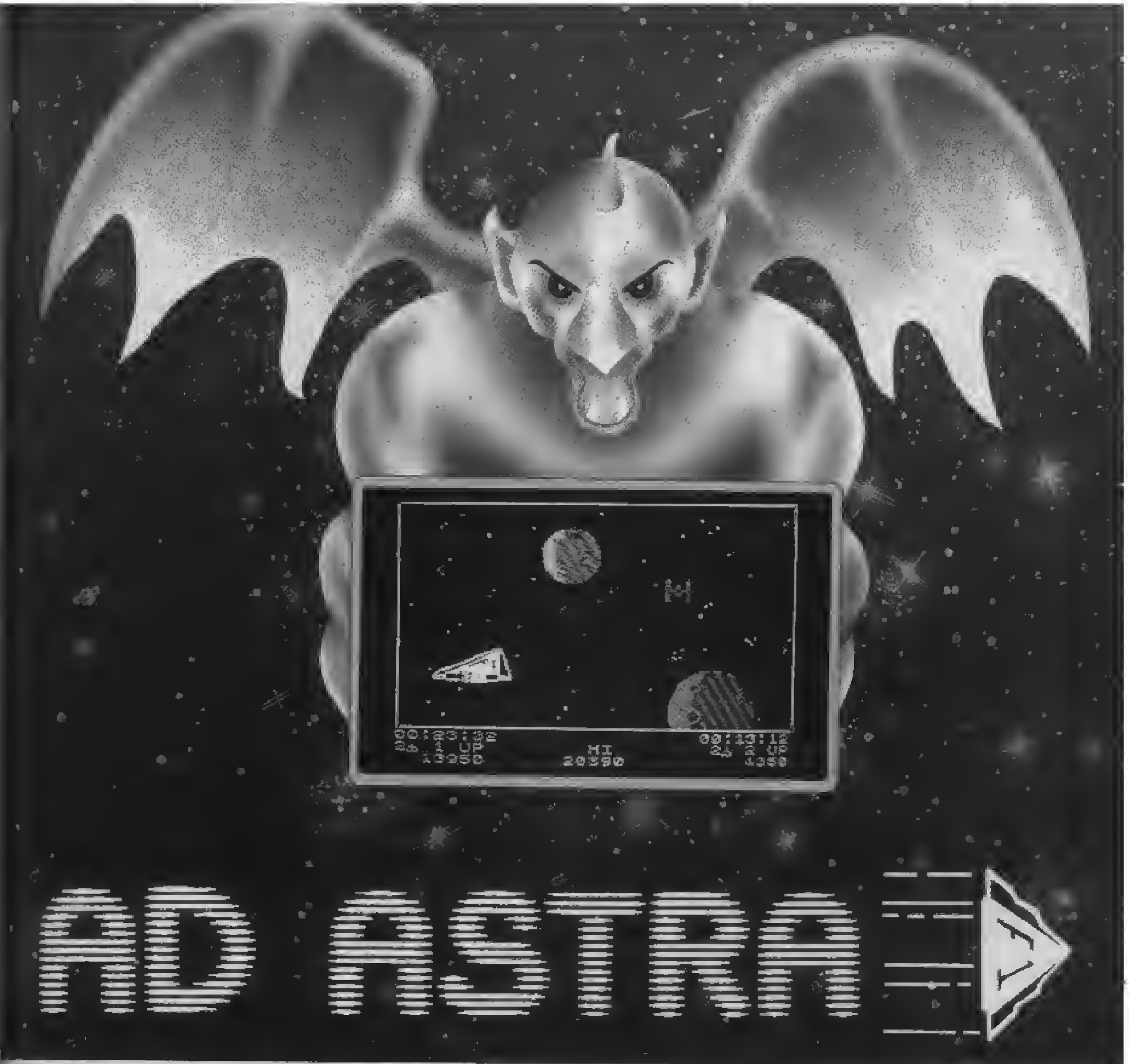
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Crash Competition

AD ASTRA!

Can you fight your way through 20 segments of fully animated space terror to reach the Way Station? Can you survive your mission to the stars?

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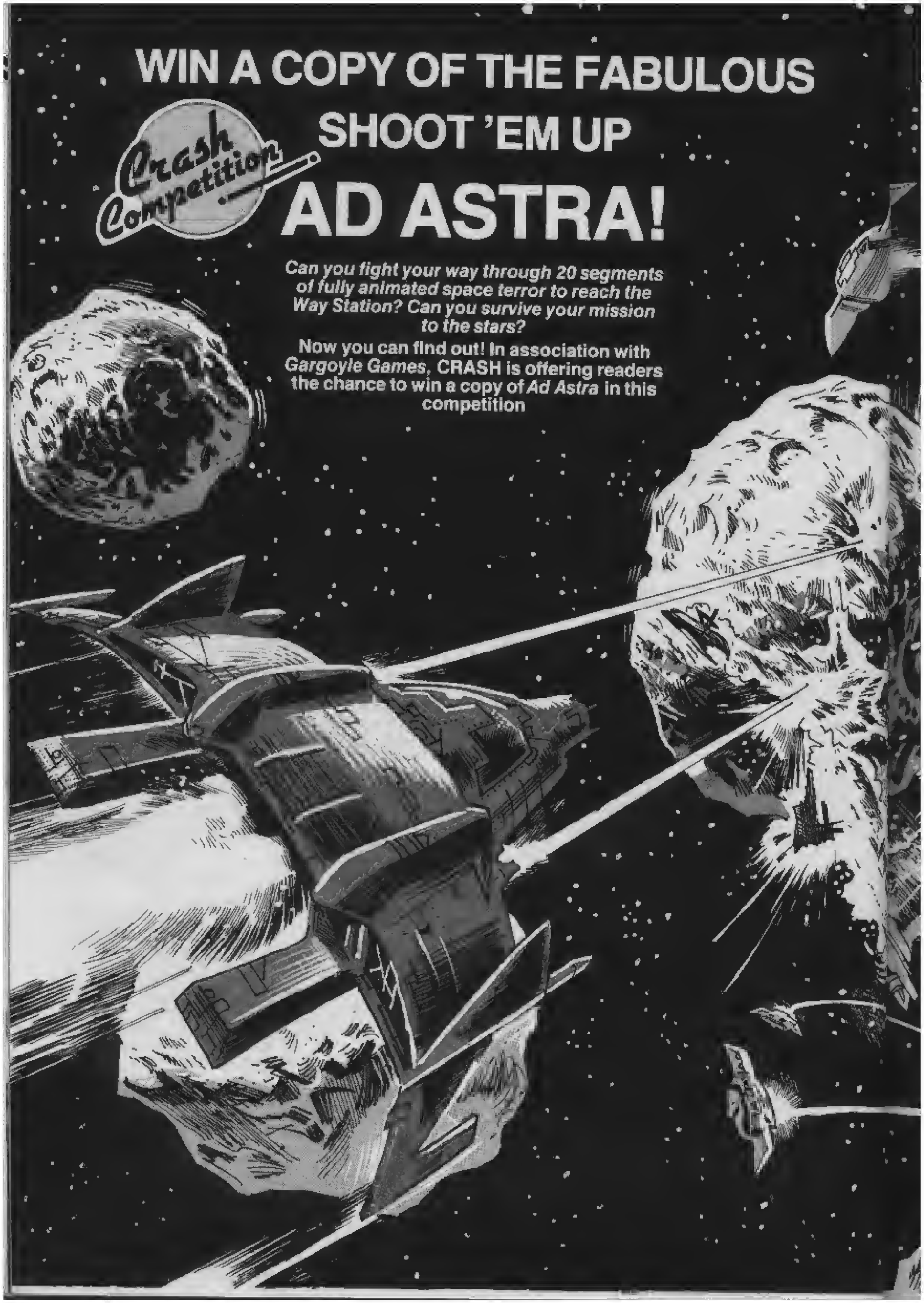

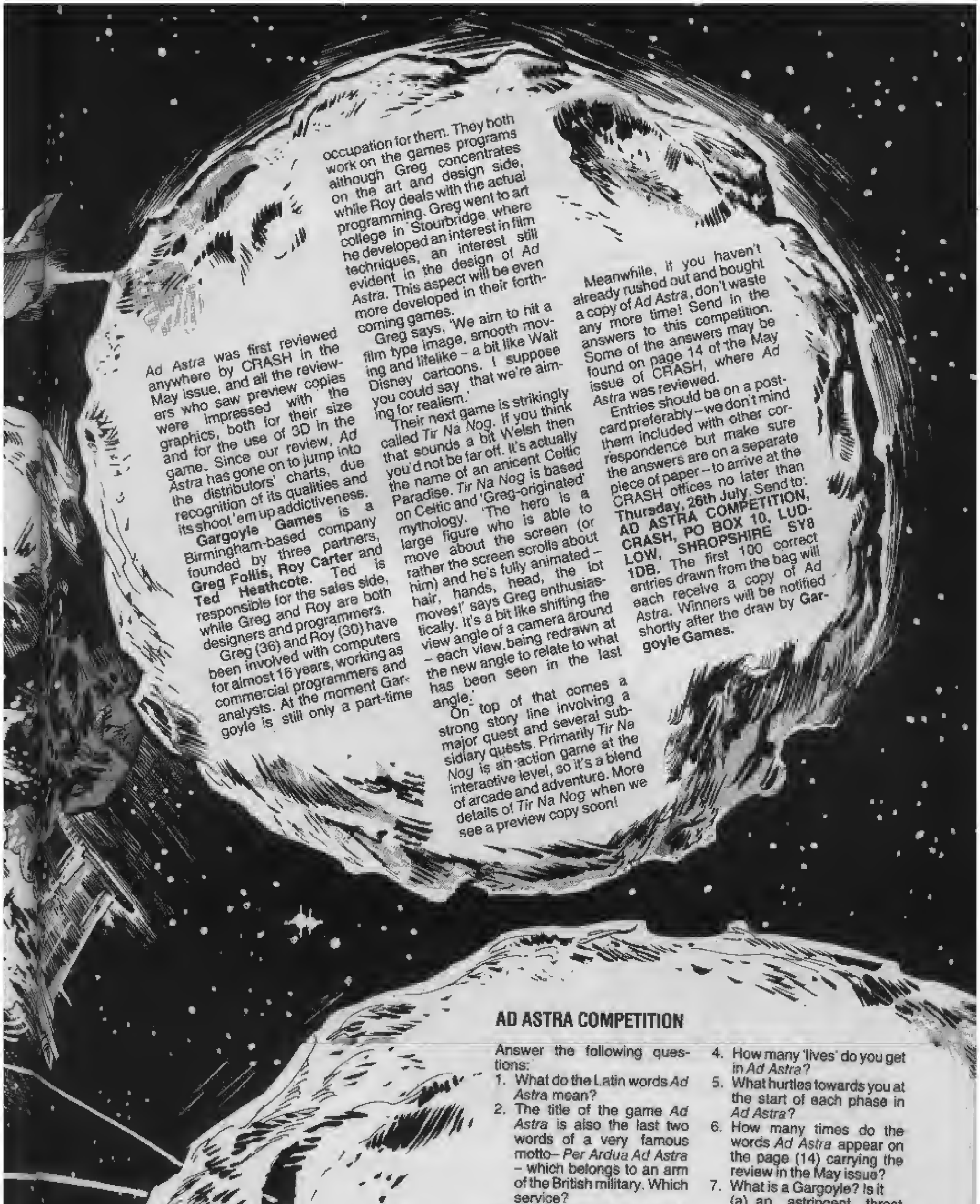

Ad Astra was first reviewed anywhere by CRASH in the May issue, and all the reviewers who saw preview copies were impressed with the graphics, both for their size and for the use of 3D in the game. Since our review, *Ad Astra* has gone on to jump into the distributors' charts, due recognition of its qualities and its shoot 'em up addictiveness.

Gargoyle Games is a Birmingham-based company founded by three partners, **Greg Follis, Roy Carter** and **Ted Heathcote.** Ted is responsible for the sales side, while Greg and Roy are both designers and programmers.

Greg (36) and Roy (30) have been involved with computers for almost 16 years, working as commercial programmers and analysts. At the moment Gargoyle is still only a part-time occupation for them. They both work on the games programs although Greg concentrates on the art and design side, while Roy deals with the actual programming. Greg went to art college in Stourbridge, where he developed an interest in film techniques, an interest still evident in the design of *Ad Astra*. This aspect will be even more developed in their forthcoming games.

Greg says, 'We aim to hit a film type image, smooth moving and lifelike – a bit like Walt Disney cartoons. I suppose you could say that we're aiming for realism.'

Their next game is strikingly called *Tir Na Nog*. If you think that sounds a bit Welsh then you'd not be far off. It's actually the name of an anicent Celtic Paradise. *Tir Na Nog* is based on Celtic and 'Greg-originated' mythology. 'The hero is a large figure who is able to move about the screen (or rather the screen scrolls about him) and he's fully animated – hair, hands, head, the lot moves!' says Greg enthusiastically. It's a bit like shifting the view angle of a camera around – each view being redrawn at the new angle to relate to what has been seen in the last angle.'

On top of that comes a strong story line involving a major quest and several subsidiary quests. Primarily *Tir Na Nog* is an action game at the interactive level, so it's a blend of arcade and adventure. More details of *Tir Na Nog* when we see a preview copy soon!

Meanwhile, if you haven't already rushed out and bought a copy of *Ad Astra*, don't waste any more time! Send in the answers to this competition. Some of the answers may be found on page 14 of the May issue of CRASH, where *Ad Astra* was reviewed.

Entries should be on a postcard preferably – we don't mind them included with other correspondence but make sure the answers are on a separate piece of paper – to arrive at the CRASH offices no later than **Thursday, 26th July.** Send to: **AD ASTRA COMPETITION, CRASH, PO BOX 10, LUDLOW, SHROPSHIRE SY8 1DB.** The first 100 correct entries drawn from the bag will each receive a copy of *Ad Astra*. Winners will be notified shortly after the draw by **Gargoyle Games.**

AD ASTRA COMPETITION

Answer the following questions:

1. What do the Latin words *Ad Astra* mean?
2. The title of the game *Ad Astra* is also the last two words of a very famous motto– *Per Ardua Ad Astra* – which belongs to an arm of the British military. Which service?
3. In the review of *Ad Astra* it says, 'The first thing to hit you in the eye with this game is ——— ——— ——— (what?).
4. How many 'lives' do you get in *Ad Astra*?
5. What hurtles towards you at the start of each phase in *Ad Astra*?
6. How many times do the words *Ad Astra* appear on the page (14) carrying the review in the May issue?
7. What is a Gargoyle? Is it
   (a) an astringent throat cleanser?
   (b) a piece of medieval statuary?
   (c) a dangerous maniac?

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CREATIVE SPARKS

DEREK BREWSTER'S

Adventure Trail

This month Derek Brewster takes a close look at a space adventure and some games for girls among others. But before that, he discusses some points on presentation . . .

PRESENTING THE ADVENTURE

The format an adventure uses for display is important since it shows you where you are, what items and monsters you see, and how you might leave a location.

It is surprising when well-coded games involving many hours of concerted effort are let down by a cluttered display with all the information jumbled together in a confusing way. An untidy, scrolling list of mixed description and input barely separated from the last location's mess is hardly the manner in which to present a complex adventure.

An improved format can make use of different colours for objects you come across, the monsters you meet, and especially when in a rush, the exits. Similarly, capital letters, BRIGHT and FLASH could be used more for emphasis.

Temple of Vran has gone some way in tackling these problems with neatly boxed-in location descriptions presented upon a freshly cleared screen and your input bearing a different colour. These are simple changes indeed yet add much to your enjoyment of the game.

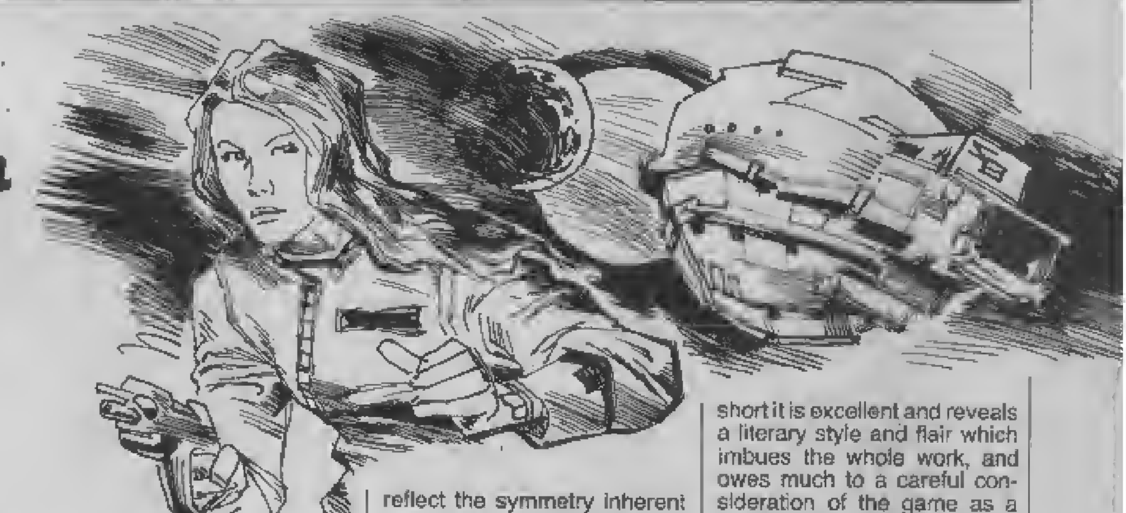
The more complicated and involved the game the more important the input routine. *Snowball* has a very poor, sluggish input routine which hinders fast typing and has no audible confirmation of key depressions; this in an otherwise highly sophisticated game.

Many adventures only use delete when it would be a simple matter to use the Spectrum input routine that allows full cursor control. A game with a broad and friendly language that goes beyond simple verb/noun couplings needs to make full use of the editing facilities of the Spectrum. It would be a useful feature, particularly with those games requiring long, intricate inputs, to enable the rescue of an incorrect input line so it can be brought back on to the screen and corrected. *Fantasia Diamond* and *The Hobbit* don't allow cursor movement through the input characters – only delete is used. In a more straightforward verb/noun adventure this would not be such a drawback but certainly is when dealing with the highly complex sentence analyses featured in these games. Long sentences are often used when communicating with other characters; it would be useful to recall the previous input were it not understood.

Valhalla has complex syntax checking which commendably doesn't allow the entry of sentence structures it doesn't understand.

Before leading you through the maze of this month's adventures let me just point out the simplest advance in presentation – white, or even better yellow, text on a black background which is much easier on the eyes around midnight!

A Crash Smash



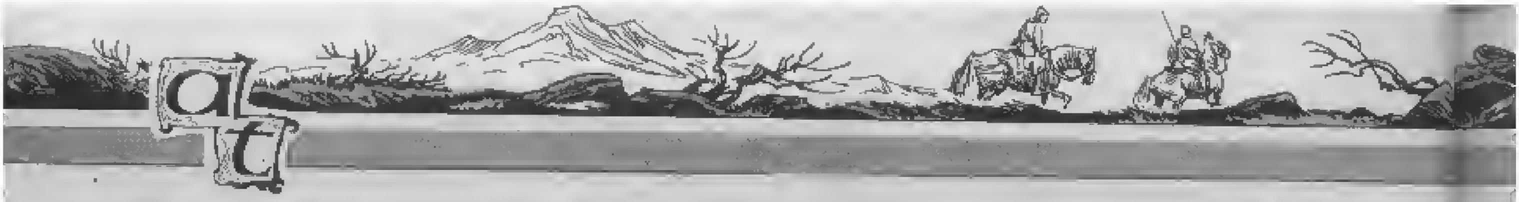
Snowball

Producer: **Level 9 Computing**
Retail price: **£9.95**
Authors: **P.and M. Austin, I. Buxton**

Snowball is a large adventure game with over seven thousand locations but don't let this dissuade you from undertaking the adventure as many of the locations are repeated. Although this may give rise to misgivings concerning the structure of the game, let me at once allay such fears. Snowball 9 is an interstar transport and the repeated locations reflect the symmetry inherent in any well-designed, modular spacecraft.

Level 9 have produced a lavish booklet giving 12 pages of information and background that leaves the fanciful efforts of less literate manufacturers firmly folded within their highly decorative cassette cases. In short it is excellent and reveals a literary style and flair which imbues the whole work, and owes much to a careful consideration of the game as a wholesome concept as opposed to a mere flight of whimsy. TV Star Trek fans may know something of which I speak.

The booklet, like the adventure, is both informed and pointedly witty in a way that only science fiction can be. It



includes a geopolitical summary of 2195 and paints a not implausible picture of five big sophisticated, fully urbanised nations overseeing a status quo that has the Free Nations poor and under-developed. In the near future the Big 5 will finally decide to help but in the 2190s they are chasing stars.

You play Kim Kimberley, secret agent extraordinary, and you are described as fairly intelligent and athletic with brown eyes and fair hair. Captain Kirk perhaps? Unlikely since you are 55 kilos and only 1.7m tall – and you're a woman.

A detailed background in the booklet tells of how Snowball 9 set off for the EEC's Ceres base to colonise the star system Eridani A Passenger discs carrying 200,000 colonists were followed by the Snowball's engine unit accelerated rapidly by its four great fusion motors. Ten ton blocks of ammonia-ice, fired from accelerators beyond Pluto, were reeled in by Snowball's skyhooks to be used later as fuel for the fusion drives. The ice-shell, which gave the Snowball Series its name, formed most of the mass of the completed craft.

You begin the adventure inauspiciously enough in a coffin – a freezer coffin – as featured in science fiction films. Much of the early phase is spent sidestepping (or waiting – a clue) the ominous clanking and indubitably deadly nightingales as you struggle to rise from the lower levels of a passenger disc. Your mission is to find the main control room in the engine unit and save the starship. You find yourself in an intimidatingly vast starship but part of the adventure is to find that part which is most consequential to your mission.

The first thing that strikes you during the early scenes is the quality and substance of the descriptions. The language is very imaginative: 'YOU ARE ON A SIGNIFICANT CYLINDRICAL LEDGE ABOVE STEPS TO A TOROIDAL WALKWAY. TRANSPEX TUBES LEAD AWAY THROUGH A MAZE OF WIRES AND MACHINERY.' and 'THE SOUTH WALL IS A WAVERY AND OBSCURE CONFUSION OF FLICKERY VIDS." Some of the examine reports are amazingly long and detailed. This literary competence is further affirmed with the inclusion of science fiction scenes and devices. Cylindrical airlocks lie between 2 iris doors, cyladders transport you up and down (or on a larger scale – around); there are transpextubes, ultrasound scalpels and plasteel, plastic with the strength of steel.

Well, if you insist on receiving some clues. You must have the helmet before entering the air lock (although you are given one or two moves to get back out) and you need the probe to repair the robot which gives you a space helmet in return.

You don't score points for collecting treasures in *Snowball*: instead you gain by doing things that are steps on the way to the eventual goal, e.g. assembling a working spacesuit scores points. According to that learned script, the booklet, if you get killed you lose a lot of points. Its amazing what you can learn if you read the instructions!

Snowball has no graphics and is a trifle slow but I would nevertheless highly recommend it. The adventure sets new standards in descriptions and can be likened to a good science fiction novel. The full, vivid and highly imaginative text evokes a mental imagery that far surpasses that which any simple computer graphics might achieve.

The program is very user friendly both with the input it will accept and its responsiveness. There is a pleasantly surprising width of intelligent responses for any input you may think up. Definitely an adventure for someone with a bad case of the 'You Can'ts'. Those powerful and realism-creating commands, Search and Examine, are used extensively to a point when you can certainly believe that Level 9 have devised their own super-compact adventure language known as 'a-code'. There's no question that they've packed a lot into this one.

Level 9 have produced a very good adventure that sets new standards in description and data compaction. This is very much my idea of an adventure and is set to become a classic.

Difficulty	9
Atmosphere	10
Vocabulary	9
Logic	10
Debugging	10
Overall value	9

Jungle Adventures

Producer: **CCS**
Memory required: **48K**
Retail price: **£5.95**
Author: **B. Bartis**

This is another in the 'Games for girls' series. The objective of the game is to help Bobo, a young African girl, to get home safely from school through the jungle.

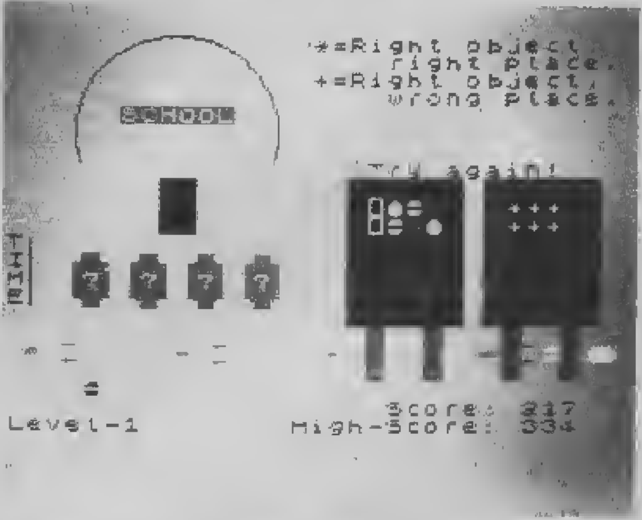
The game consists of two parts.

The first part is a mastermind style game, set in the school, where you try to guess the four objects concealed in the four jars. You have six guesses in a limited time determined by the level of play, 1-5. You can play with or without sound, which is a nice touch. The prizes Bobo wins help her bribe the creatures to allow her safe passage through the jungle. The graphics and sound are good and the movement of hamburgers, books, eggs and coconuts along the bottom of the screen is very smooth.

You enter the second part of the game carrying forward the objects you guessed correctly from the first part, e.g. two books, a hamburger and an egg. You see a map flashed up on to the screen for about a second (level 1) and what you can remember of the positions of snakes, gorillas, owls and cannibals is used to help navigate your way through the jungle. Bobo starts at the bottom left of the screen and you must guide her to her hut diagonally to the opposite corner.

On your journey across the screen you meet shops and creatures. It you are quick enough you can buy an item (preferably one you couldn't bring from the first part) at the shop since you are never sure which creature you will bump into next. An owl demands a book, a snake an egg, a cannibal a hamburger and a gorilla coconut. If too slow at giving up the object demanded you lose one of your five lives. At higher levels the flash indicating the creatures, positions is shorter and you are given less time to shop or give up the objects.

Jungle Adventures emerged as one of the more addictive games to pass through my tape recorder this month. It is a simple game but has that easy charm of a game well thought out and colourfully implemented. A game for girls, boys and the young at heart.

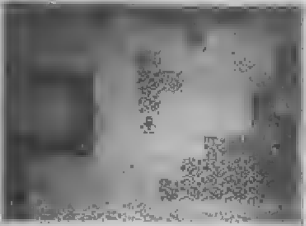


Difficulty	5
Atmosphere	N/A
Vocabulary	N/A
Logic	8
Debugging	9
Overall value	6

The Ring of Darkness

Producer: **Wintersoft**
Memory required: **48K**
Retail price: **£9.95**
Authors: **J.K. Humphreys and D.A. Briskham**

The Ring of Darkness was a highly successful game on the Dragon 32 and has now been converted for the Spectrum.



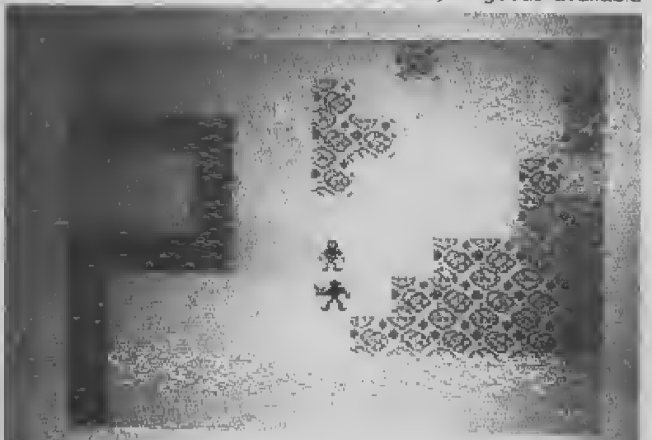
Your first task is to develop a character to represent you on your quest and this is achieved via a program on side 'A' of the cassette. After choosing your character name 40 points are distributed to determine your intelligence, strength and agility. In keeping with true role-playing vogue the adventure is enacted within a midworld, your race can be Dwarf, Elf or Human and characteer classes include Wizard, Warrior and Thief.

The game sees you moving through a scene with simple representations of rivers, mountains and forests. In effect your token remains in the central area of the screen and the map scrolls in the opposite direction to your apparent movement. On first playing you are unable to cross the rivers or climb the mountains and the forests are the home of deadly accurate and seemingly unassailable archers. At almost regular intervals you are confronted by bandits and evil rangers and, since it is difficult to escape, a simple battle scenario begins. Although you can be resurrected three times, on each occasion one of the objects you were carrying is mislaid.

Every now and then a settlement appears though Borderton looks remarkably similar to Port Stillwater with a Smiths, Arms, Pubs, and Magic and King's domains. Buying and selling items at Will's Weapon Store is a nice part of the game. One quest had me searching for a jelly cube (curious – but similar forms are not unknown to the role-playing fraternity) and on another I was searching for the Sinclair sign.

The game consists of several programs that must be loaded consecutively but to be honest I could only reach the second level (a 3D maze) before an untimely end at the hands of the skeleton. If only I'd started out as a warrior, and not a wizard whose character is blighted by his inability to cast spells unless ensconced within the underground caverns.

The game is in real time to the extent that if you leave the game the word PASS will appear every 20 seconds. A more conscientious approach will see you gaining experience with progressive increases in technology and the variety of goods available to you. Hence a little patience in the early stages, when experiences are mostly of a violent nature, is probably what's needed. It's a good idea to keep up to date with your status, hit points (a measure of your mortality) and food units (with each movement using up food) as starvation can be an embarrassing end to first attempts.



```
ATCH OUT!
 bandit. Damage 10
```

The Ring of Darkness will take a long time to solve because it is a relatively long and complex adventure and there is too little information provided at the start with the effect that you set off having no idea of what exactly it is that you must do. The choice of keys for the Spectrum version are very poor – QW & P – mixing up and down with left and right (much like the syncopation exercise where you circle your head with one hand and pat your stomach with the other) and the painfully slow movement of the figure through the adventure becomes monotonous after a short time.

The game falls between the two stools of arcade and adventure without the addictive qualities of either but marks an interesting adapation of the role-playing theme.

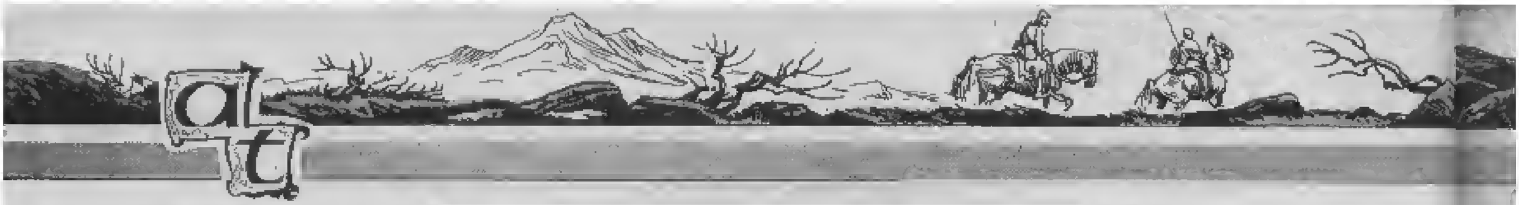
Difficulty	6
Atmosphere	6
Vocabulary	N/A
Logic	6
Debugging	9
Overall Value	6

Diamond Quest

Producer: **CCS**
Memory required: **48K**
Retail price: **£4.95**
Author: **M. Sherlock**

CCS have produced a series of games aimed at the young female market. I must confess to being dubious of both the concept and the market that exists for such software. There again, remember cabbage-patch dolls?

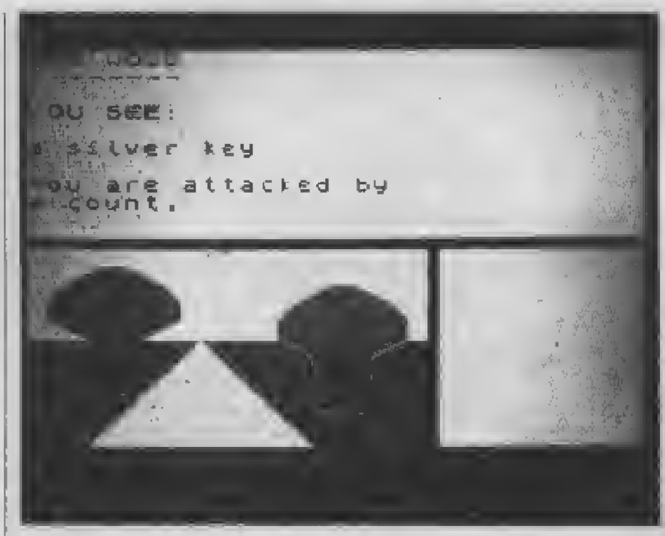
You begin with a choice between three levels which is unusual for an adventure game – Impossible, Hard or Easy. I started out with the first option, Impossible, no sexism implied I hope.



Your quest is to find four keys and make your way to the golden palace where the diamond treasure is to be found. You begin in the Desolate Lands and it comes as something of a surprise to find the wooden key in the first scene, and further, to be attacked by a hulk in a game one assumed to be at least only moderately violent. On going into battle with the hulk I was quickly and unceremoniously killed. Where it says impossible you'd be wise to take this literally. So much for the macho stance – let's try Easy.

You find yourself this time in the wood where again we find the wooden key straight away but it is much easier to fight the foe at this level – in this case a pack of marauding lions is easily dealt with. Go north and you are at The Volcano, where you are attacked by some tribes - men, but what is this? – the golden key. This game seems incredibly easy: only two scenes and I have two of the four keys already! This is, I take, no comment on a girl's ability to play adventure games. The tribesmen are easily disposed of and travelling north we enter The Foothills, find some lunch and are attacked by some blood-thirsty bats. I eat the food and my energy goes up.

Diamond Quest has a rather lurid pink cover with 'Games for Girls' firmly embossed on the front. The game seems to have little that might appeal to a girl and were it even aimed at a more general market it could be described as positively violent as hardly a scene goes by without an attack emanating from one quarter or another. The graphics are very simple chiefly as a result of the author limiting himself to the 21 user-defined graphics. The plot is unimaginative and uses no detailed descriptions; there is no sense of mystery to retain interest for any length of time. The level 3 option, Impossible, would seem superfluous as it is no misnomer. Every time you visit a location – even if one you've visited previously – you are confronted by a combatant whose fighting skills and initial energy points would seem to bear little relation to their expected prowess. Are fleas as deadly as lions? The game makes a poor adventure as there is a conspicuous lack of problems to solve and the fight sequences allow no room for thoughtful interaction.



```
  WOOD
OU SEE:
 silver key
ou are attacked by
 count.
```

Did the male author of this software really design it for a feminine audience?

It would seem likely CCS contrived to aim this program at its limited market for the simple reason that it is not of sufficiently high calibre to be judged on its own merits. As a marketing ploy it is more likely to alienate the boys.

Difficulty	3
Atmosphere	3
Vocabulary	3
Logic	6
Debugging	9
Overall Value	4

Atlas Assignment

Producer: **Virgin Games**
Memory required: **48K**
Retail price: **£5.95**
Author: **M.C. Davis**

A top-class criminal, codenamed Atlas, has stolen the American nuclear defence plans and it's your unenviable task to make sure he doesn't do something silly with them – like blow up the world. The training manual is not as intimidating as it sounds since it involves only a few notes on the inside of the cassette inlay. It is a text adventure featuring three simple arcade games. We are told much of the author whose hobbies include book collecting and serious computing.

Load " " Code – curious, most machine-code programs these days use a Basic loader and most of this program is Basic. On loading you are given your Atlas Assignment Briefing and your first location finds you outside the Chief's Office. The text is the inverse of the normal for the Spectrum

CRASH ADVENTURE TRAIL CHART

Most computer magazines publish their own charts these days. With only one or two exceptions, adventure games fare badly in these charts. Mainly because few adventurers are stocked by the chain stores who make up the charts.

We at CRASH would like to produce the first adventure chart. This chart will be based on what you think about the games you have played, not on sales figures. This will give the many excellent games not sold by the chain stores a chance of charting. This should prove a much better indicator of which really are the best adventure games than does any other chart.

To contribute all you have to do is give the adventures you have played a rating **out of ten** and send these ratings to us at CRASH. We will then calculate the average readers rating for each game and draw up the adventure charts accordingly.

Voting on the **CRASH Adventure Trail Chart** need not affect any votes you might want to send in to the main **HOT LINE CHART**, so don't go dropping adventures out of your HOT LINE votes because you also want to vote for the ADVENTURE CHART!

The names of all contributors will go into the bag for a monthly draw and the first out of the bag will win **£40 worth of software** and a **CRASH tee-shirt**, with five runners up winning a CRASH tee-shirt each.

You may **WRITE** in to us or ring us on the **CRASH HOTLINE PHONE-IN NUMBER** but **please** remember to tell the answering machine that your vote is for THE ADVENTURE CHART. The number is **0584 3015**.

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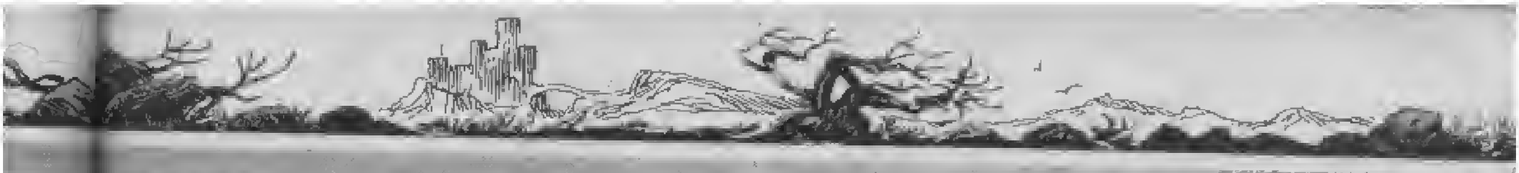
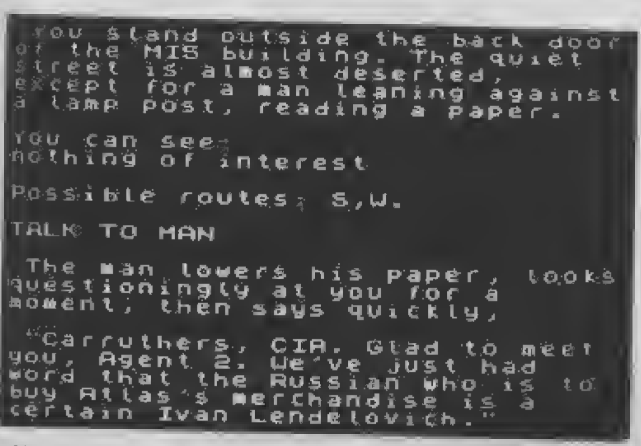




```
You stand outside the back door
of the MIS building. The quiet
street is almost deserted,
except for a man leaning against
a lamp post, reading a paper.

You can see-
nothing of interest

Possible routes; S,W.

TALK TO MAN

 The man lowers his paper, looks
questioningly at you for a
moment, then says quickly,

 "Carruthers, CIA. Glad to meet
you, Agent 2. We've just had
word that the Russian who is to
buy Atlas's merchandise is a
certain Ivan Lendelovich."
```

with white on a dark background which is less tiring on the eyes and BRIGHT is used to emphasize inputs.

Moving south, you reach the equipment room and see a labelled bottle and an automatic pistol with only three bullets. The message in the bottle is truth and the pistol comes in handy when engaging the type of hoodlum who likes to remove and check the colour of your liver. The program, which accepts straightforward Verb/Noun entries, accepts both TAKE and the more expedient GET and only requires the first three letters of the noun and four of the verb. At the back door of the M15 building you exchange pleasantries with the man leaning against a lampost and he proves most helpful. He informs you of a certain Ivan Lendelovich, the Russian who is to buy Atlas's merchandise. Moving on via an affluent and careless drunk you meet the belligerent shop-keeper. You draw the gun that has given you such a sense of security and shoot only to meet with the report hat you don't hit anything in particular. Apparently, you can only shoot the people you are supposed to shoot.

It is at this point that my suspicions were aroused and later confirmed: the game too often returns to the unswerving path of linear development. The only meaningful interaction is that which allows you to progress. The result is a loss of realism and the game is reduced to nothing more than a string of puzzles.

After much intelligent analysis you reach the first of the three arcade games, which happens to be the lesser of the three. It is a poor version of a bomber game where one bomb demolishes the whole building and the plane travels much too fast. Since the game is very difficult it is annoying to be sent all the way back to the beginning of the adventure on your inevitable failure. The second arcade game has you fired upon by an erratic and hiccupping helicopter – deceitively difficult – and the third, my favourite of the three, is played out on the lawns of Cherriere Lodge where the ferocious Alsatians are coaxed into the ponds in the manner of a strategy rather than an arcade game. Briefly, die-hard adventurers may not welcome these arcade games, more especially the first two.

Atlas Assignment is a rather modest text adventure with a conspicuous linear progression and limited vocabulary with the inevitable result – 'You Can't'. However the diminutive wordstock allows a quick response time and the sound is used to good effect.

Difficulty	7
Atmosphere	
Vocabulary	5
Logic	5
Debugging	9
Overall Value	6

Waxworks

Producer: **Digital Fantasia**
Memory required: **48K**
Retail price: **£9.95**
Authors: **B. Howarth and C. Ogden**

A large box houses this Mysterious Adventure; a sticker tells you have the right version – it requires a ZX Spectrum 48K ram and one cassette recorder.

Inside you find a booklet filled mostly with general hints on solving adventures which, leaving aside the exercise in speed reading, will not warrant much attention from experienced adventurers. Conversely, fresh adventurers may learn something of the creed. By far the most useful information is on the first page where you see the Spectrum Version has some special features (don't say the BBC looses out again!). Pressing ENTER gives you a pictorial view of your current location and pressing again puts back the text.

The story line tells of a day at the seaside spent stuffing yourself with junk food whereupon you are in need of a long snooze in the cool and quiet of the waxworks. You endeavour to escape the nightmare that ensues.

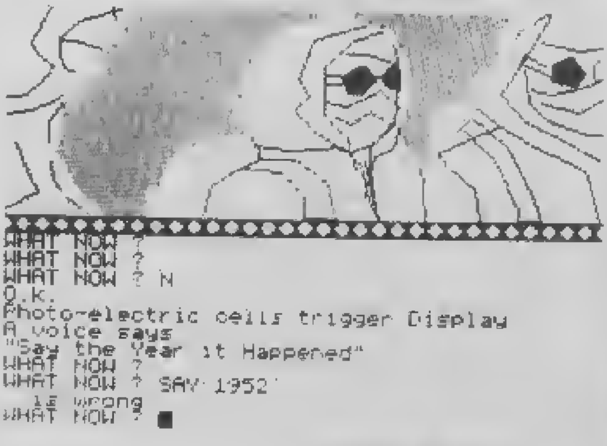
The screen is split into two areas. The upper half displays what you see graphically, or in words with the name of the location and a list of the items there. The lower has prompts, input and brief comments.

You're in the leisure lounge of the waxworks and moving north gives you the washroom. Examining the toilet door and reading the bottom half of the screen you are informed of an object. If you're used to playing the adventures I've been playing (lots!) you may be caught out since the identity of the object is inserted, almost hidden, amongst the list of items in the top half of the screen. This can be a little disorientating at first but what is more, had you been in graphics mode – and who could blame you as the graphics are superb – you would not notice the identity of the object at all. Not necessarily a bad thing, I point it out only because it strikes me as non-standard.

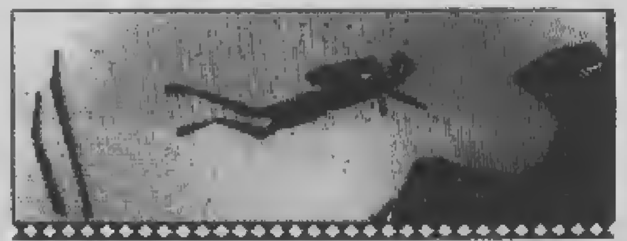
Set within the washroom floor is a grid but after unlocking it you can't simply go down and it is quite a struggle to find the right words. The vocabulary is not far removed from Verb/Noun (take off gloves must be entered remove gloves) but combines the surefootedness of this style with some noteworthy flexibility. Commas are used as in 'QUICKLY GET THE LAMP, SWORD, CLOAK AND STAFF' and the word THEN or a full stop is used as in 'GO NORTH THEN CLIMB THE TREE. EXAMINE HOLE THEN GO DOWN.' Single word entries include help, score, quit, save, inventory, run, jump, shout and the increasingly popular wait.

The eccentricity of the language often adds to the game but one solution is only invoked with the curious command 'GO AIRLOCK'. The examine command must be used with care. Examining the jacket reveals nothing – until it is picked up. One innovative feature is found on searching the pile of junk in the workshop which is well worth examining twice.

The waxworks of your dreams can become tricky to map and the solutions to some of the problems, perhaps in keeping with this theme, are a little unreal. Rising from the



```
WHAT NOW ?
WHAT NOW ?
WHAT NOW ? N
O.k.
Photo-electric cells trigger Display
A voice says
"Say the Year it Happened"
WHAT NOW ?
WHAT NOW ? SAY 1952
  is wrong
WHAT NOW ? ■
```



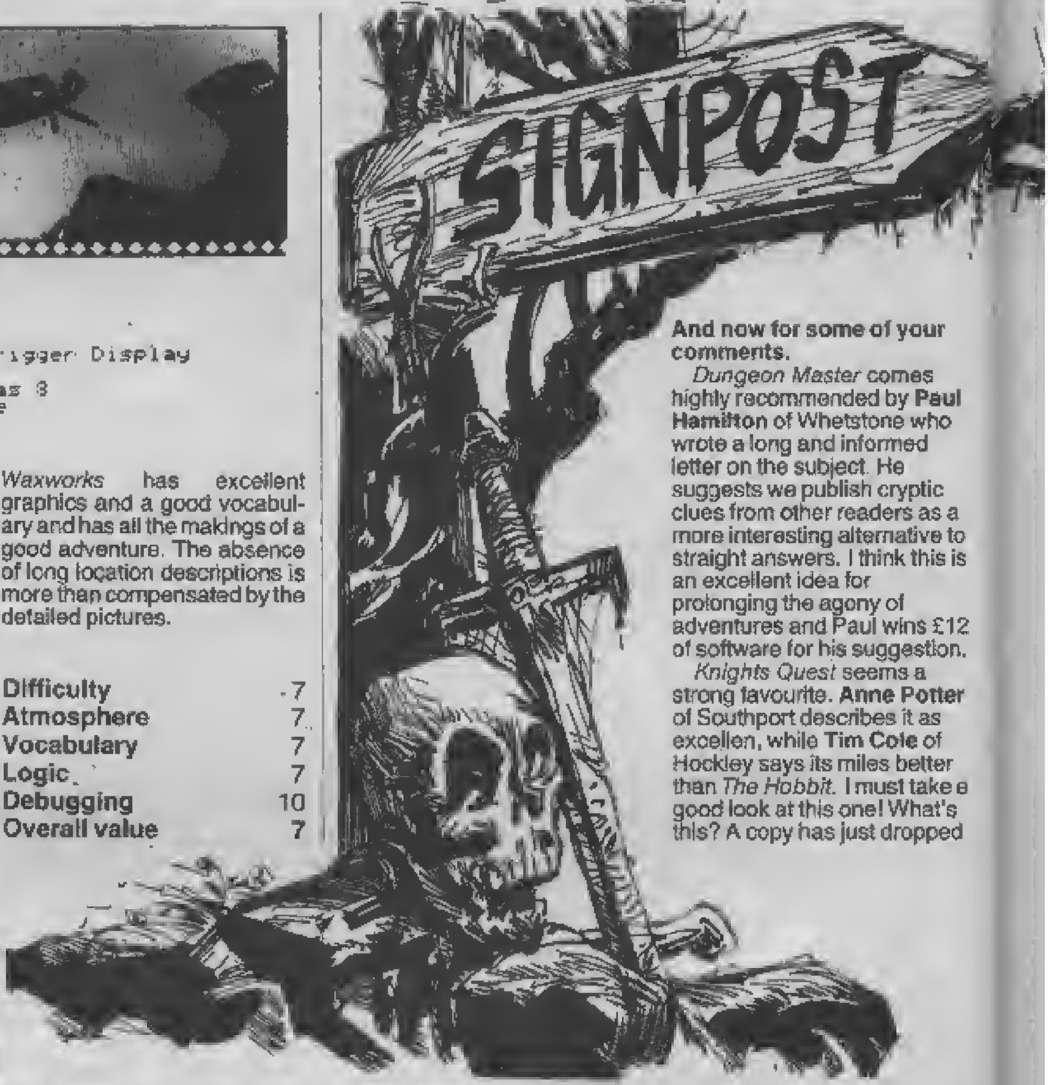
```
  is wrong.
WHAT NOW ? S
O.k.
WHAT NOW ? W
O.k.
Photo-electric cells trigger Display
A voice says
When I was 31 my son was 3
I am now double his age
 Say  how old I am
WHAT NOW ? █
```

treehouse takes you into the main hall but no matter how you descend leads you back into the leisure room. Indeed, in many places the game sends you back to this main area.

In the grand hall, up from the leisure room, north gives you the Everest and west the Undersea World display. If you answer the display bedecked with Jacques Cousteau and his scuba gear correctly the aqualung decides to appear in the hall of mirrors. It's worth noting that when answering these questions you must type 'SAY ANSWER' and not just the answer. There are two mazes in the game – one being easily enough for my tastes-in the hall of mirrors and the other in the sewer (both six location mazes) which is painstakingly mapped out for the sake of a rat-trap.

Waxworks has excellent graphics and a good vocabulary and has all the makings of a good adventure. The absence of long location descriptions is more than compensated by the detailed pictures.

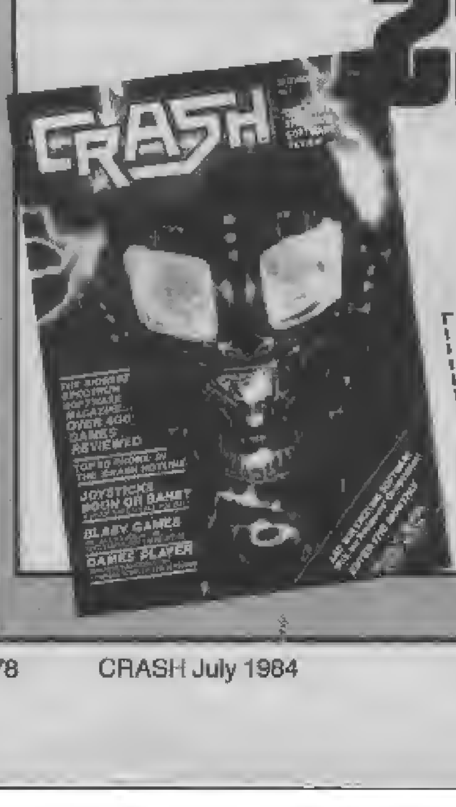
Difficulty	7
Atmosphere	7
Vocabulary	7
Logic	7
Debugging	10
Overall value	7



And now for some of your comments.

Dungeon Master comes highly recommended by **Paul Hamilton** of Whetstone who wrote a long and informed letter on the subject. He suggests we publish cryptic clues from other readers as a more interesting alternative to straight answers. I think this is an excellent idea for prolonging the agony of adventures and Paul wins £12 of software for his suggestion.

Knights Quest seems a strong favourite. **Anne Potter** of Southport describes it as excellen, while **Tim Cole** of Hockley says its miles better than *The Hobbit*. I must take a good look at this one! What's this? A copy has just dropped



BACK NUMBERS

We can now offer a limited number of Back Copies to readers who may have missed out on

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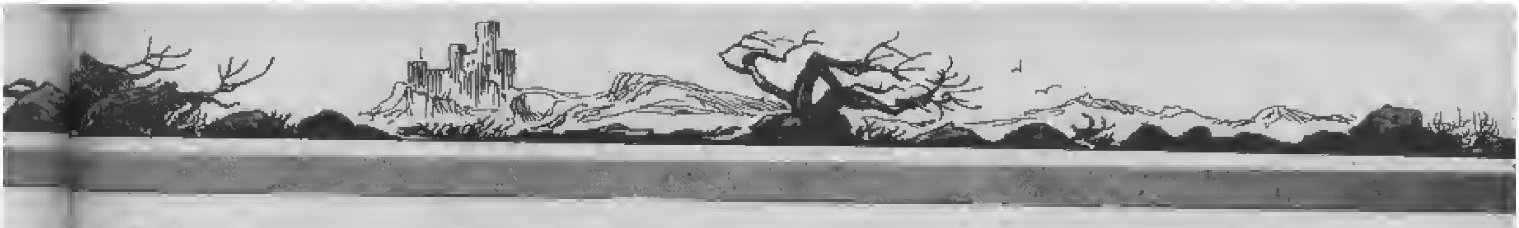

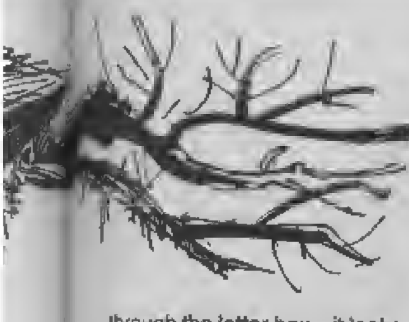

through the letter box – it looks like I'll be able to answer your queries shortly – or will it just lead to more puzzles?

Many explorers are having problems with mazes whether it be a forest, desert or twisting narrow passages, the solution is achieved in a similar way. Firstly, enter the maze with as many objects as you can carry and drop an object at each location. By doing this you can map out the maze in terms of the objects at each location.

I have recieved several missives from people correctly completing *Velnor's Lair* without achieving that magical 200 points. The reason for this is that points are awarded for (i) eliminating evil creatures, (ii) collecting treasure; and (iii) solving problems. Points are necessarily lost for attacking friendly creatures. As the game ends on killing Velnor there may be treasures yet undiscovered or evil creatures still roaming caves and even problems unsolved whose points remain uncollected.

Keepo on sending comments on adventures you have played and suggestions for improvements to **Adventure Trail**. I shall be giving away £12 of software each month for the most interesting or helpful letters.

McKENSIE
DAVID MUNRO
How do you get out of the prison cell?
Check your inventory; you never know what useful objects you might be carrying.

SMUGGLERS COVE
JASPER SHARP
How do you get through the Palatian Room?
Don't bother – try the angry pirate instead.

VELNOR'S LAIR
CARLOS MOZO
Where do I find the oars?
Try searching piles of rubbish, it's amazing what Trolls will throw away.

COLOSSAL ADVENTURE
T. WILLIAMS
How do I open the clam?
I'm sure Neptune would have had the key!

URBAN UPSTART
TIM MAYWELL
How do you get out of the police cell and the hospital?
Bide your time – wait patiently in the cell. In hospital try S-S (take and wear coat) N-E-E-N-N-W-W-N and you're out. (Since I haven't played this game I must thank Robin Bisiney of Newark for these tips.)

THE HOBBIT
HOWARD TAYLOR
How do you get the bard to kill the dragon?
Pick up the bard in the village (he doesn't like walking). When you come to the dragon drop him (gently I hope) and say to him shoot dragon.

VALHALLA
ALMOST EVERYONE
How do you find Ofnir?
Go to the Plain of Midgard where the help command tells 'You need Boldir's help to go north.' You can either summon Boldir or hang around and he will appear. You will then be able to go north into Rankle's Hall. To find Ofnir you must go NW to another hall, but you cannot do this when Rankle is present. After killing Rankle you go NW and find a tightly locked chest. As your strength is too low you will need to summon someone else to open the chest. Inside Ofnir can be found.

This solution is supplied by Howard Taylor from Licheard, Cornwall, to whom I am extremely grateful.

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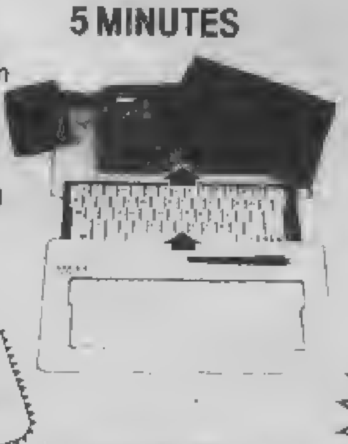

The CRASH HOTLINE

This month's biggest climb is from **Micromega's** *Code Name Mat* – an enormous 30 places upwards to the 6 slot, just pipping the ever-popular *3D Deathchase*. The other big news is the inevitable arrival of **Ulimate's** *Sabre Wulf*. What's amazing is that it reaches 29 in the chart with only two days eligible voting! **Addictive's** *Football Manager* not only proves popular but climbs up again to number 7. Other climbers are *Android 2*, *Pogo* with new entries in the lower area of *Blade Alley*, *Psytron*, *Jack and the Beanstalk*, *Tribble Trouble* and *Mugsy*. **Gilsoft's** adventure utility *The Quill* has made another big leap upwards too, from 31 to 24. The big question now is, will *Sabre Wulf* knock Willy off the top?

THE CRASH HOTLINE PHONE NUMBER IS 0584 (Ludlow) 3015

HOW TO USE THE CRASH HOTLINE

Method 1
Ring the Hotline telephone number (above) and record your votes on the answering machine. Please speak clearly, spelling out name and address if it's a 'difficult' one! List your five games starting with the number one.

Method 2
Use the coupon below, making sure you fill in all the details. Pop the coupon in an envelope and send it to us. Alternatively you may send a letter if you don't want to cut up the mag.

The telephone Hotline is getting very jammed after a new issue comes out, so bear with us if it's engaged. If all else fails – write in!

BRILL 'N' FAB HOTLINE PRIZES!!

Whether you phone or write in, all names go into the voluminous bag to be drawn monthly. First out receives **£40 worth of software** plus a CRASH tee shirt, and the five runners-up receive three issues of CRASH free plus a CRASH tee shirt.

Others may try and copy us but the CRASH HOTLINE CHART is the one that counts – and you are the people that make it count.

YOUR VOTE IS EXTREMELY IMPORTANT — USE IT PLEASE!

JULY HOTLINE STATISTICS

With our new collation system for the Hotline (we're using a computer!) it's now rapidly possible to give an indication of how many votes by percentage the top games received. Overall, the top seven positions in this month's chart received a total of 48% of the vote, with *Jet Set Willy* way out in front – getting 19% of the total votes cast. *Manic Miner* received 8%, *Atic Atac* 7%, *Lunar Jetman* 5%, *Wheelie* 4%, *Code Name Mat* 3% and *Football Manager* 2%.

This month's Hotline received the highest number of calls and forms ever, with a staggering 24,000 plus votes recorded (not including the Adventure Chart).

Of the phone calls received approximately 7% collapsed in giggles and were not entered and 3% were obscene phone calls – many of which may be compiled for a Christmas special! (I'm joking, Mrs Whitehouse.) So to the 90% who make up the votes, thank you, and keep it up – the voting that it.

This month's Hotline winner is **Timothy Williams,** Leeds, W. Yorks. The four runners-up are **Rachel White,** Barnaby, near Selby, Yorks, **Darryn Reid,** Belfast, N. Ireland, **Graham Pugh,** Ely, Cardiff, S. Glamorgan, **Gary Hawes,** Longhorsley, Morpeth, and **Russell Smith,** Leven, Fife.

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My top five favourite programs in descending order are:

TITLE PRODUCER
1
2
3
4
5

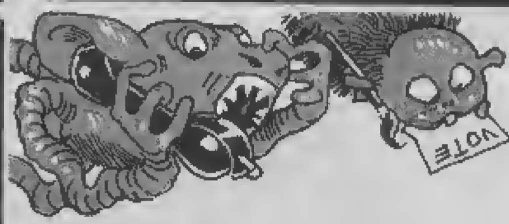
CRASH HOTLINE SPECTRUM SOFTWARE CHART

TOP 50 FOR JULY

(Figures in parenthesis indicate last month's position)

1 (1) **JET SET WILLY** Software Projects
2 (2) **MANIC MINER** Software Projects
3 (3) **ATIC ATAC** Ultimate
4 (4) **LUNCAR JETMAN** Ultimate
5 (5) **WHEELIE** Microsphere
6 (36) **CODE NAME MAT** Micromega
7 (14) **FOOTBALL MANAGER** Addictive
8 (6) **3D DEATHCHASE** Micromega
9 (7) **SCUBA DIVE** Durrell
10 (8) **CHUCKIE EGG** A&F Software
11 (10) **FIGHTER PILOT** Digital Integration
12 (12) **CHEQUERED FLAG** Psion
13 (20) **ANDROID 2** Vortex
14 (13) **THE HOBBIT** Melbourne House
15 (11) **JETPAC** Ultimate
16 (21) **FRED** Quicksilva
17 (28) **NIGHT GUNNER** Digital Integration
18 (–) **TRASHMAN** New Generation
19 (8) **3D ANT ATTACK** Quicksilva
20 (24) **VALHALLA** Legend
21 (18) **THE PYRAMID** Fantasy
22 (30) **POGO** Ocean
23 (26) **SCRABBLE** Psion
24 (31) **THE QUILL** Gilsoft
25 (27) **KRAKATOA** Abbex
26 (16) **ZZOOM** Imagine
27 (17) **ALCHEMIST** Imagine
28 (22) **BUGABOO** Quicksilva
29 (–) **SABRE WULF** Ultimate
30 (23) **PENETRATOR** Melbourne House
31 (–) **STONKERS** Imagine
32 (15) **HUNCHBACK** Ocean
33 (39) **MAZIACS** DK'Tronics
34 (23) **HALL OF THE THINGS** Crystal
35 (–) **BLADE ALLEY** P.S.S.
36 (–) **PSYTRON** Beyond
37 (19) **DOOMSDAY CASTLE** Fantasy
38 (48) **URBAN UPSTART** Richard Shepherd
39 (25) **BLUE THUNDER** Wilcox
40 (41) **BEAR BOVVER** Artic
41 (38) **TRANZ-AM** Ultimate
42 (29) **MR. WIMPY** Ocean
43 (34) **PHEENIX** Megadodo
44 (–) **JACK AND THE BEANSTALK** Thor
45 (–) **TRIBBLE TROUBLE** Software Projects
46 (–) **TIMEGATE** Quicksilva
47 (–) **TEST MATCH** C.R.L.
48 (35) **PSST** Ultimate
49 (–) **MUGSY** Melbourne House
50 (32) **SPLAT** Incentive

VOTE for the CHARTS



The winner of the Adventure Trail Hotline is: **Ann Potter**, Crossens, Southport, and the runners-up are: **Farley Soltick**, Egham, Surrey, **R. McCusker**, Ibrox, Glasgow, **N.H. Oughton**, Moreton-in-the-Marsh, Gloucs, and **Charles Redman**, Burton, near Christchurch, Dorset.

CRASH ADVENTURE TRAIL CHART

1 **THE HOBBIT** Melbourne House
2 **VALHALLA** Legend
3 **VELNOR'S LAIR** Quicksilva
4 **ESPIONAGE ISLAND** Artic
5 **URBAN UPSTART** Richard Shepherd
6 **SNOWBALL** Level 9 Computing
7 [illegible] **CAVE** Dorcas
8 **PLANET OF DEATH** Artic
9 **INCA CURSE** Artic
10 [illegible] **THA 1** Mikrogen
11 **GOLDEN APPLE** Artic
12 **QUEST** Hewson Consultants
13 **MOUNTAINS OF KET** Incentive
14 **BLACK CRYSTAL** Carnell
15 **KNIGHT'S QUEST** Phipps Associates
16 **COLOSSAL ADVENTURE** Level 9 Computing
17 **INVINCIBLE ISLAND** Richard Shepherd
18 **CIRCUS** Digital Fantasia
19 **LORDS OF TIME** Level 9 Computing
20 **SHIP OF DOOM** Artic
21 **MAGIC MOUNTAIN** Phipps Associates
22 [illegible] **GULCH** Phipps Associates
23 [illegible] **BATON** Digital Fantasia
24 **SMUGGLERS COVE** Quicksilva
25 [illegible] **1** Abersoft
26 [illegible] **ADVENTURE** Melbourne House
27 [illegible] **TOWER** [illegible]
28 [illegible]
29 [illegible]
30 [illegible]

THE MONTHLY CRASH QUIZ

RESULTS OF THE MAY CRASH QUIZ

We asked you to identify the 12 inconsistences between two drawings. The three **winners** are **Simon Webster** from Cambridge, **David Atherton** from Barnsley, S Yorks, and **Anthony Barber** from Waterloo, Huddersfield. They each receive £25 worth of software of their choice and a CRASH T-shirt. The three **runners-up** each get a T-shirt and they are, **Benjamin Clegg** from Gerrards Cross, Bucks., **T.J. cowan** from Kingston-upon-Thames, Surrey, and **Mark Lowen** from Caister-on-Sea, Norfolk.

CRASH CROSSWORD

This month's incredible quiz is a crossword, the basis of which has been sent in by a reader, **Jeff Herbert** from Alvechurch in Worcestershire. We've added a few words to his to make it a bit more complex. It was just as well someone sent in a quiz this month as the CRASH puzzle department is still in a state of shock on discovering that neither of the two anagram puzzles in the last issue were correct! In the first there were too few asterisks for letters – In the second an essential I was missing. But CRASH readers are so clever that these little hiccups don't appear to have put anyone off!

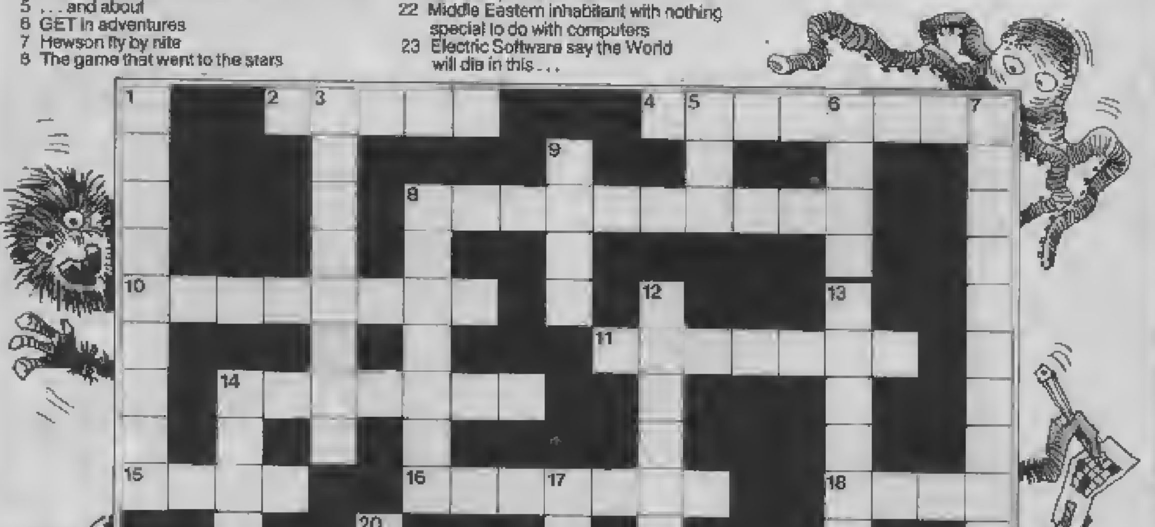
You can either fill in the crossword below and send it in to us, or if you prefer not to cut up the issue, just list the words with their **Across** and **Down** numbers beside them in the order the clues appear. Entries must reach the CRASH offices no later than July 26. The first three correct entries out of the bag on that date will each win £25 worth of software and a CRASH T-shirt. The three runners-up will also get a T-shirt each. don't forget to include your name and address with the entry!

CLUES ACROSS

2 Adventurous name for an old Fantasy
4 Fire on Top
8 (UK) producer of 14 down
10 A rubbish game
11 When CRASH does it
14 Software houses hate 'em
15 Look for (synonym)
16 The second was in 3D
18 Ultimate do it to joysticks
19 Lunar inhabitant
21 For infinite lives
22 A Tab statement
23 Above 4 across
25 A Quicksilva hero
28 See 23 down (2)
30 A software house on the run
32 Developed the ZX Crumpets
33 CRASH Editor

CLUES DOWN

1 Zippy rests glasses on them
3 A programmer who Backed his own Hunch
5 . . . and about
6 GET in adventures
7 Hewson fly by nite
8 The game that went to the stars
9 Golly! It's the software houses
12 Adventure from an Australian residence
13 Play the game
14 Features a drunken Piman
17 Silversoft's robots caused it
20 Several quests in heaven
22 Middle Eastern inhabitant with nothing special to do with computers
23 Electric Software say the World will die in this . . .
24 Softek's Joust by another name
26 Creative Things 'Attack'
27 He's a Gem at the Disco
29 Good adventures do it with their atmosphere
31 Takes 8



Answers in the August issue, winners announced in the September issue.

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CRASH REVIEWERS COMPE

As we promised, here are a few reviews from entrants to the CRASH . REVIEWERS' COMPETITION, which received a **Special Mention.**

Included are reviews from **A.J. Green,** Toddington, Beds; **S. Guillerme,** London W8; **R. Norfolk,** Stoke-on-Trent; and **Vic Groves,** London NWI.

Special Mention

A.J. Green

HEATHROW A.T.C.

Hewson Consultants

Air traffic controllers spend most of their working lives studying television screens. If this is the case, you might ask, surely this is one function that should be easy to simulate on a computer? And you'd be right.

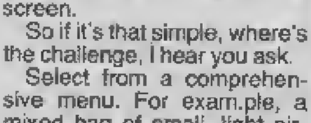
In this simulation 'blips' come up on the screen and you direct the aircraft they represent to land on the runaway at Heathrow airport, and most realistic it is too! Even the familiar 'tail' of the signal is reproduced to enable you to see the direction of the aircraft. In fact, the only major item missing is the static-filled crip exchanges between the controller and the aircraft's crew, but even this is displayed at the bottom of the screen!

Don't panic if the instructions included on the inlay card appear complicated and are difficult to absorb – the program gives you a chance of watching the computer demonstrate how it's done, before you tackle the job by yourself. Mind you, after becoming proficient at the exercises I'm not convinced the computer makes such a good job of it after all!

Basically, the idea is simple – as the aircraft signals appear on the screen, circling or 'holding' at one of four beacons at varying distances from Heathrow and conveniently referenced alongside, you guide them by means of imputting compass bearings along with controlling their speed and height levels, to land on a runway at Heathrow, approaching in either an eastward of westward direction. All the necessary data concerning each aircraft – the heading, height and speed you have instructed them to follow – is neatly shown on an easy reference display at one side of the screen.

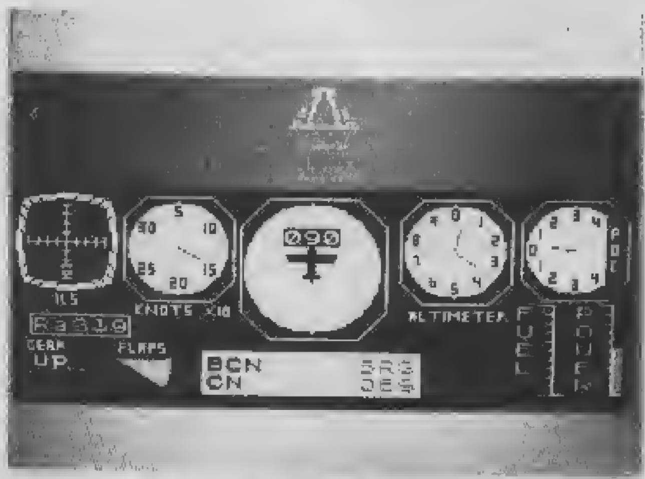
So if it's that simple, where's the challenge, I hear you ask.

Select from a comprehensive menu. For example, a mixed bag of small, light aircraft and large Jumbo jets, compulsory height separation, rogue aircraft, sudden emergencies, etc, and the going gets really rough! Fortunately, the imputting of the instructions to the aircraft is easy and straight forward: this is essential because the airspace around Heathrow can soon get very very congested and all one's attention needs to be devoted to those 'blips' on the screen, not the keyboard. A nice helpful touch provided is that once an aircraft is 'locked on' to the correct glidepath for a successful landing this information is notified to you, so enabling you to forget that particular problem and free you to concentrate on the hordes of others approaching fast.



Heathrow A.T.C. is a fascinating simulation, demanding fierce concentration, an orderly mind and is very addictive. You even receive a rating after each exercise. The program can give you hours of enjoyment and if you're fed up with or want a change from those wham sphlat high-speed arcade games and want a quiet, thoughtful action game then this is the one for you.

Criticism? Yes, but a reserved one. The time restriction on each exercise is only 25 minutes, and, believe me, it seems nearer 10 minutes with all that work on your hands. But there again – should Delta Four 'hold' at Biggin Hill beacon for hours while I sort out the unholy mess that I created in the first place?



Approaching the runway – Flight Simulation

Special Mention

S. Guillerme

FLIGHT SIMULATION

Psion

This game must be one of the oldest simulation games designed for the Spectrum. Its title itself gives enough explanation of what it is all about: a flight simulation game. You are the pilot of a 'small two-engined propellor-driven plane', you can take off, land on one of two runways, or just fly about, locating your position on a map and the help of various instruments, all in real time.

The simulation in itself is quite detailed. At the beginning of the program you are faced with three options: take-off, start in flight at a random position, and the 'final approach' for landing. Then you will be asked if you want to include the effects of wind. But beginners beware! If you say 'yes' your plane will be far more difficult to handle. Then the simulation itself starts.

The main display is the pilot's cockpit view with a detailed instruments panel in the lower half of the screen, and a view of the world outside through the cockpit windows. Through these you can see the 'horizon' formed by the light sky and dark ground. If you are near a runway you will see its lights in 'three dimensional perspective', and also lakes. As you turn, climb, dive, so the horizon and features on the ground will move accordingly through the cockpit windows.

Your instrucments are rather detailed and technical: speed indicator, altimeter, rate of climb, fuel left, engine throttle, etc.... The understanding of those instruments is vital if you do not want to crash immediately. So always keep the instructions 'near you, they provide everything you need to know about the functioning of the plane.

The second screen is a map showing all the lakes, mountains and runways, as well as the beacons used to navigate. Those beacons can be changed, depending on the direction you want to head to. Your plane is also shown on this map, but maybe on too large a scale to be really precise about your position (especially when landing).

CRITICISM

One thing seems to be lacking in this game: excitement. Apart from flying, you just are not given any tasks to perform, or do not have anything to shoot at. I found that the most interesting part was landing your plane, as this needs a good deal of practise. Otherwise once you have mastered the controls of your plane it is rather dull. The lack of sound gives a sort of eerie feeling to flying, as if you were in a glider rather than a 'two engine propelled plane'. Colours and graphic details do not help either. Apart from lakes and runway lights you do not see anything. I would have liked a bird flapping its way throught he screen, or some town with lit skyscraper on the ground.

The seven pages of instructions are detailed but actually hard to digest. The Instrument Landing System does not seem to work properly (it is better to ignore it altogether) and you sometimes get some oddities when looping the loop.

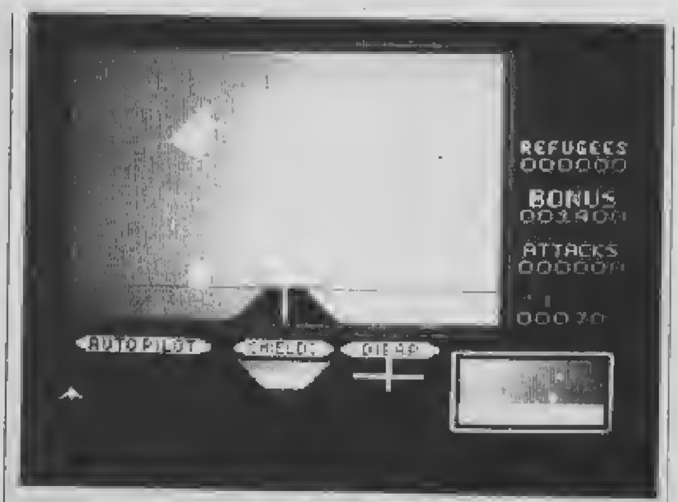
However this is in fact a good simulation game. It takes time to master the keys. Detailed instruments and realistic (I guess), they just should have made it more exciting, less contemplative. Arcade freaks beware!

Special Mention

R. Norfolk

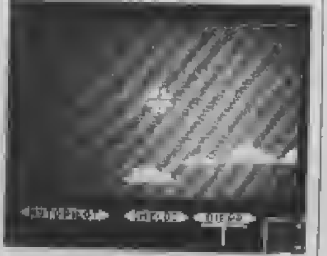
ZZOOM

Imagine



In the midst of some 'international incident' you are dropped into the cockpit of a powerful and well-armed fighter plane, with instructions to save the lives of refugees who are being bombed mercilessly by waves of enemy planes. If you are successful in surviving two waves of attackers, you are moved to a desert location where more refugees are being decimated by tanks, then to an area over water with submarines surfacing without warning.

The inlay card gives very full instructions for keyboard play (the joystick options being given on screen) and lists six functions with a good variety of keys for each one, enabling the player to choose the layout which suits him best. A useful feature is the use of any top row key to freeze the action, enabling you to stop for a breather, if the frantic pace will allow you to get at the top row! In practise, once the missiles are armed for the first flight over the desert it becomes almost unnecessary to use the machine guns and the operation of five keys is then quite easy. Use of the machine guns when trying to hit the tanks has a tendency to thin out the numbers of the very refugees whom you are there to save.



The first screen is of a flat landscape, the straight line of the horizon being broken only by the straggling lines of the refugees who are attempting to cross the road along which you are flying. Lifting the nose of your plane reveals a clear blue sky with drifting patches of fleecy white clouds devoid of all menace, except for the cross wires of your gunsight, where the twin streams of machine gun fire will converge. At the top right of the screen a message indicates 'condition green' but this quickly changes

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'Each quest is selected by you at the beginning of the game and you will have five game days in which to complete it. The time factor is exceptional in adventure games' ***Sinclair User Dec 83***

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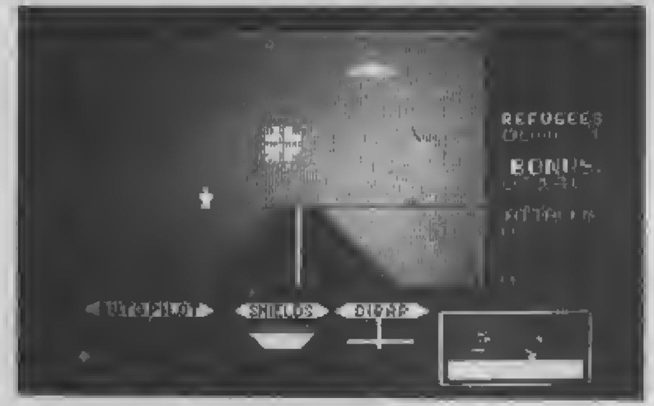
to 'condition yellow' and a glance at the small screen at bottom right shows why. This screen shows the area bounded by your main view and a large area outside this, on which the radar blips of approaching aircraft can be seen. 'Condition red', and the aircraft comes into view, some close and within range of your guns, some farther away and out of range until they break formation to wheel at you. Bombs hurtle down amongst the refugees, who sometimes stand and wave their fists at the aircraft in impotent fury, and Exotron missiles whirl towards you at terrifying speed. Too many missile strikes against your shields results in them gradually disintegrating, and you only have three spares. A missile hitting your plane when it is unshielded results in instant grounding at speed, although the only visible damage is a large crack across the windscreen.



Shooting the refugees is more fun on Zzoom – but not so nice!

After each wave of attackers and a return to 'condition green', the auto pilot comes into operation and you can relax for a moment or two whilst the score and bonus is calculated. Then back into battle, which after two waves moves to a desert scene with tanks crawling menacingly over the horizon. As the palm trees flick by beneath, you go into action against the tanks, aided by the addition of missiles to your armoury. Now however the temptation is to 'nose down' to get the tanks which you missed on the horizon, with the almost inevitable result of an attempt to build sand castles with your plane., which promptly mends its windscreen and takes off unaided.

Persevere with the tanks and you find yourself dealing with submarines, which surface, attack the boatloads of refugees and hurl Exotrons at you before submerging again. Once more it is necessary to fly very low, and this is where the 'di-bar' comes in very handy. It indicates height and direction of flight and flashes when you are flying at minimum height. The use of a joystick would probably increase the risk of a pile-up, whereas with the keyboard it is possible to get down to the minimum height and then leave the 'down' key alone.

The graphics are superb, extremely well animated and with a use of colour which is bright without being distracting. Sound, within the limitations of the Spectrum, is well used; in fact the only complaint is that response keys really need to be a little faster, especially left and right when after those tanks.

A reasonably easy game on which to make moderate progress but a difficult game to complete (assuming that it has a finite length). Addictive and very good value for money, but be prepared to take a few flying lessons to achieve success.

Special Mention

Vic Groves

THE QUILL

Gilsoft

In order to be able to write a good text adventure for the Spectrum, you need three vital factors: (a) an original idea; (b) a good deal of time; and (c) the ability to program your computer in order to write your adventure.

The first of these factors – inspiration – can come to you at any time; sleep, on the bus, at the launderette, or indeed, all three at once, asleep on the bus going to the launderette!

The (b) factor – time – can, believe it or not, usually be found, especially when you have come up with what seems to be a good factor (a). The real problem arises with factor (c).

Let's be honest about this: When you first bought your Spectrum you were full of good intentions. It wasn't just going to be a games machines, was it? You were going to learn all about Basic and then all there was to know about Machine Code. It wouldn't be too long before you were programming along with the best of 'em. It didn't quite work out that way for most of us though, did it? The Sinclair book got a bit heavy going, Space Raiders was only a fiver and you couldn't ever find quite enough time to really get to grips with 'strings' without tying yourself up in knots.

If you have ever had your dreams of writing adventures cast away on such a tide of lethargy, prepare to have your creative buds re-awakened by *The Quill*, from Gilsoft.

What they have done is to virtually take off your hands the programming part of adventure writing, and design a framework, into which, following prompts on the screen and instructions in the manual, you put your own ideas and create your own masterpiece.

Now comes the time to put my cards on the table. I am not a computing genius and know precious little about programming in Basic and even less about Machine Code. Given this background, the book and software which go to make up *The Quyill* has to be fairly straight forward for me to be able to follow it. It must have been so, because follow it I did, even if it was not as easy as falling off a log or, in adventuring terms, as easy as being decapitated by a Troll. Understanding took a bit of effort, a couple of sitting and a good few cups of coffee. In a perverse kind of way it is here that you can be pleased the program costs £14.95. At that kind of price you feel obliged to 'carry on', whereas a £5.95 price tag may make lthe temptation to give up and return to another onslaught of Galaxians too great.

The manual takes you through a mini-adventure, explaining as you go how to set up various aspects of the adventure. When you understand the various concepts you are in a position to design your own adventures ont he same lines, *The Quill* being more than flexible enough to make each different adventure an original piece of work.

Amongst the options open to you are the describing of each location, a dictionary of each word the game understands, a method of counting so that events can occur after a given number of turns, a movement table so that the designer can control where each command will send your player, and a random chance element, handy in battles and similar situations. The basic concepts are well explained, despite a small mistake on page 22 of the manual, but the fact that even I could rectify the error at least proved that the concept was well explained! My only other niggle was that I could not find out how to control the 'Flash' command. However, having said that, I must give full marks to Gilsoft for explaining it to me upon request.

Sound can be incorporated into the adventure by the usual Beep commands, as can graphics, but I have to be honest and say that at this stage I am not sufficiently familiar with the program as to inclue my own User Defined Graphics. However, they can be used, so watch out Picasso!

On my first attempt at adventure writing with *The Quill* I was able to design a 75-location game. No mean feat for someone who even had trouble with for-next loops using Basic!

Should you design a game you would like friends to be driven mad with, it can be Saved and Run without *The Quill*, thus enabling you to pass it around, and should you believe your game is marketable, all Gilsoft ask for is a mention, so you can drive the whole country insane and still collect all the royalties.

There is little doubt that the £14.95 price tag is off-putting at first glance, but there is equally no doubt that with a little effort and patience *The Quill* will be the best investment you made since buying the Sinclair Hand-Warmer itself.

SPECGRAFFITI

FRANCO FREY

ANIROG
SPECGRAF
SPECTRUM

Utilities galore! From screen creators to moving graphics, a multitude of aids are available to help the budding programmer along. **Anirog's** *SPECGRAF* is in aid of the User Defined Graphics manipulators, UDGuys for short. The program allows you to hold up to 200 UDGs in memory at any one time. Up to nine UDGs can be edited on screen simultaneously. Let's take a look at this latest UDG fast breeder.

The cassette, which is contained in a neatly packaged plastic case, contains *SPECGRAF*, the UDG creator on one side and *Roller*, a demonstration program, followed by *Toolkit*, an assortment of subroutines for handling the UDGs on the other.

SPECGRAF

The main menu displays seven options. (1) VIEW WHOLE SET displays the current UDG set containing 20 characters from A to T. The current UDG set can be selected with (4) CHANGE SET from any of the 10 sets. (7) PRINT BYTE VALUES will list the bytes of the set in hexadecimal or decimal form in two pages with the possibility of a hard copy. (2) SAVE SET TO TAPE and (3) LOAD SET FROM TAPE involve the storage and retrieval of the UDG sets. A name can be given to the tape file, which can either contain a single set or the complete repertory of UDGs. These sets can be loaded for future editing or for serious use into any of the sets from 0 to 9. (6) EXIT provides an exit facility from the utility. Run returns you to the facility. (5) DEFINE CHARACTERS leads to the central activity of the program, namely the editing of the UDGs.

The FORMAT MENU makes available nine different formats. This enables up to nine UDGs to be edited in the format in which they will appear in the program for which they are being designed (from 1 to 3 x 3 characters). The program requires an input of the first character to be defined. The group of characters required for the chosen format must be consecutive and within the same set. Next you are asked for the set required. If existing characters are to be edited, the set in which they are held must be entered.

The screen will display the grid in the format selected. Grids of forms with more than one character indicate the individual character areas with white and yellow backgrounds. The existing characters will be copied to the grid and a miniature screen in the top right. A flashing cursor may be controlled via the cursor keys or the Kempston joystick. The current start character is indicated at the bottom right of the screen.

The options available are displayed on the right-hand side of the screen.

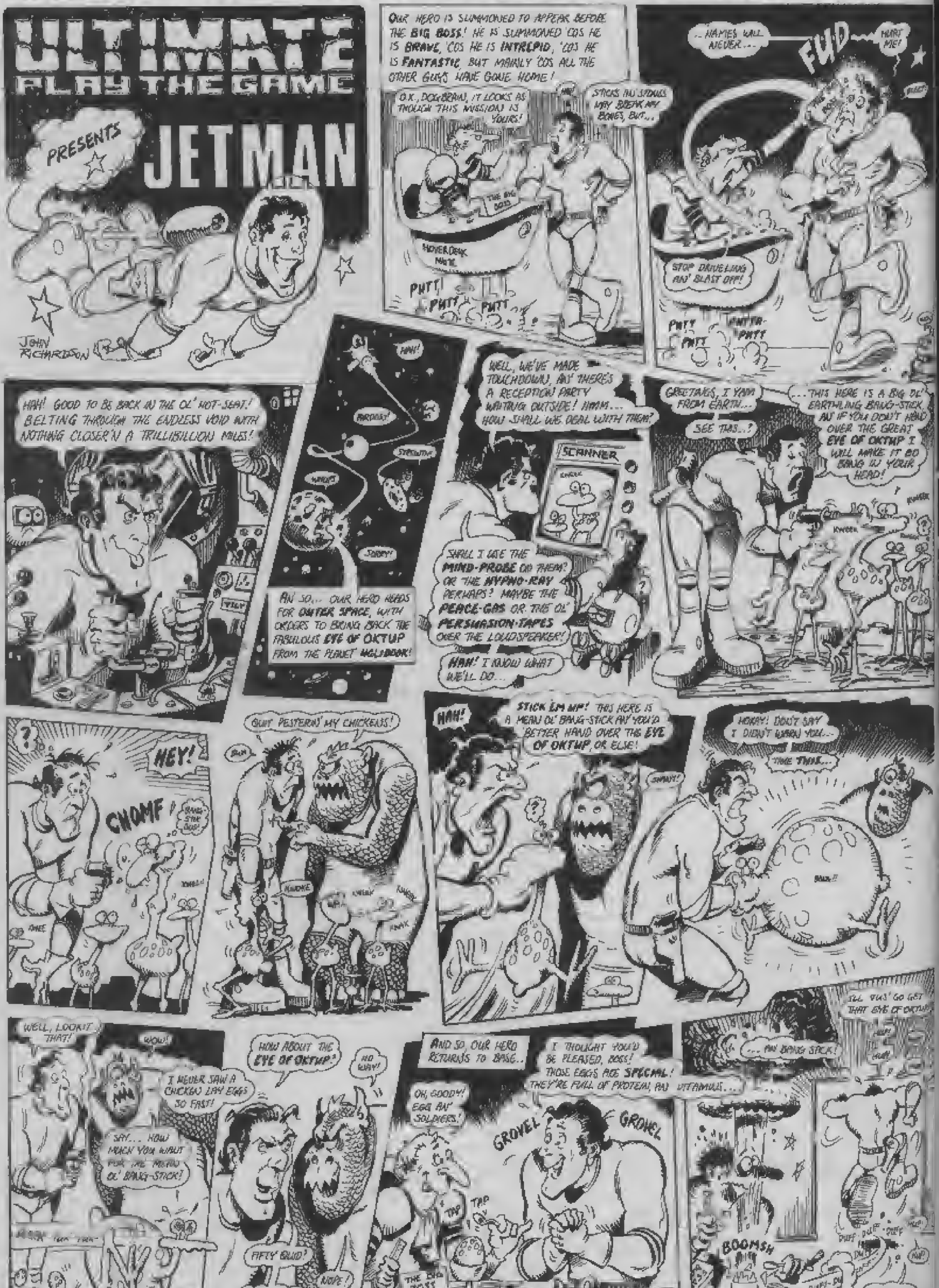
FILL key F fills the square, i.e. plots a point
ERASE key E erases the square, i.e. plots inverse
BLANK key B clears the grid
INVERT key I inverts the character
CHANGE key C changes the start position of the group
STORE stores the displayed result in memory. Main menu may be called without losing the graphics after this
EXIT key X returns to main menu
ROTATE rotates square group configurations by 90 degrees
HORIZONTAL MIRROR mirrors left-hand side of grid on to the right (left/right symmetry)
VERTICAL MIRROR mirrors from top to bottom
NEWSET key N selects a new UDG set and changes the current start indicator
PRINT gives a hard copy of the display
MOVE SPECGRAF (shifted cursors) moves characters around in the grid pixel by pixel with permanent loss of pixels at the edge of the grid
GET reloads the grid with the current start characters

ROLLER

Once created and saved to tape, the UDGs require handling from within a Basic program. Roller demonstrates the use of two sets of graphics and by breaking into the program illustrates all the points required to use *SPECGRAF* UDGs in your own program. The routines used are contained in *Toolkit* which follows *Roller* on the tape. The 200 UDGs may be used either by paging between 10 sets of 20 UDGs or, alternatively, by displaying 96 different characters by poking the system variable CHARS with 256 less than the starting address of your graphics. This will redefine the characters from space to the copyright symbol with the *SPECGRAF* characters.

CONCLUSION

The SPECGRAF is a useful and dependable tool for creating User Defined Graphics. Considering the amount of facilities it provides, the price of £9.95 may prove to be a little high in view of the stiff competition such as **Procom's** *DYNAMIC GRAPHICS* with its excellent moving sprite facility or **Print 'n' Plotters** *PAINTBOX* with its integrated screen creator. *SPECGRAF* certainly performs well and should ensure that you don't run out of UDGs any more.


ULTIMATE PLAY THE GAME
PRESENTS
JETMAN
JOHN RICHARDSON
OUR HERO IS SUMMONED TO APPEAR BEFORE THE BIG BOSS! HE IS SUMMONED 'COS HE IS BRAVE, 'COS HE IS INTREPID, 'COS HE IS FANTASTIC, BUT MAINLY 'COS ALL THE OTHER GUYS HAVE GONE HOME!
O.K., DOGBRAIN, IT LOOKS AS THOUGH THIS MISSION IS YOURS!
HM!
STICKS AN' STONES MAY BREAK MY BONES, BUT...
THE BIG BOSS
HOVERDESK MK.II
PUTT! PUTT! PUTT
...NAMES WILL NEVER...
FUD
HURT ME!
STOP DRIVELLING AN' BLAST OFF!
PUTT PUTT PUTTA-PUTT
HAH! GOOD TO BE BACK IN THE OL' HOT-SEAT! BELTING THROUGH THE ENDLESS VOID WITH NOTHING CLOSER'N A TRILLIBILLION MILES!
HAH!
SPLOSH!
WHUP!
SORRY!
AN' SO... OUR HERO HEADS FOR OUTER SPACE, WITH ORDERS TO BRING BACK THE FABULOUS EYE OF OKTUP FROM THE PLANET UGLIBOOK!
WELL, WE'VE MADE TOUCHDOWN, AN' THERE'S A RECEPTION PARTY WAITING OUTSIDE! HMM... HOW SHALL WE DEAL WITH THEM?
SCANNER
SHALL I USE THE MIND-PROBE ON THEM? OR THE HYPNO-RAY PERHAPS? MAYBE THE PEACE-GAS OR THE OL' PERSUASION-TAPES OVER THE LOUDSPEAKER!
HAH! I KNOW WHAT WE'LL DO...
GREETINGS, I YAM FROM EARTH...
SEE THIS..?
...THIS HERE IS A BIG OL' EARTHLING BANG-STICK, AN' IF YOU DON'T HAND OVER THE GREAT EYE OF OKTUP I WILL MAKE IT GO BANG IN YOUR HEAD!
KWEEK
KWEEK
HEY!
CHOMF
BANG-STICK GONE!
QUIT PESTERIN' MY CHICKENS!
KWAKE
KWAK
HAH!
STICK 'EM UP! THIS HERE IS A MEAN OL' BANG-STICK AN' YOU'D BETTER HAND OVER THE EYE OF OKTUP, OR ELSE!
OKAY! DON'T SAY I DIDN'T WARN YOU...
TAKE THIS...
WELL, LOOKIT THAT!
WOW!
I NEVER SAW A CHICKEN LAY EGGS SO FAST!
SAY... HOW MUCH YOU WANT FOR THE MEAN OL' BANG-STICK!
HOW ABOUT THE EYE OF OKTUP?
NO WAY!
FIFTY QUID?
NOPE!
THREE DOZEN EGGS?
YOU'RE ON!
AND SO, OUR HERO RETURNS TO BASE..
I THOUGHT YOU'D BE PLEASED, BOSS! THOSE EGGS ARE SPECIAL! THEY'RE FULL OF PROTEIN AN' VITAMINS...
OH, GOODY! EGG AN' SOLDIERS!
GROVEL
GROVEL
TAP TAP
THE BIG BOSS
I'LL 'ELP GO GET THAT EYE OF OKTUP
...AN' BANG STICK!
BOOMSH
DUFF DUFF DUFF
WHERE DAT OL' EYE?

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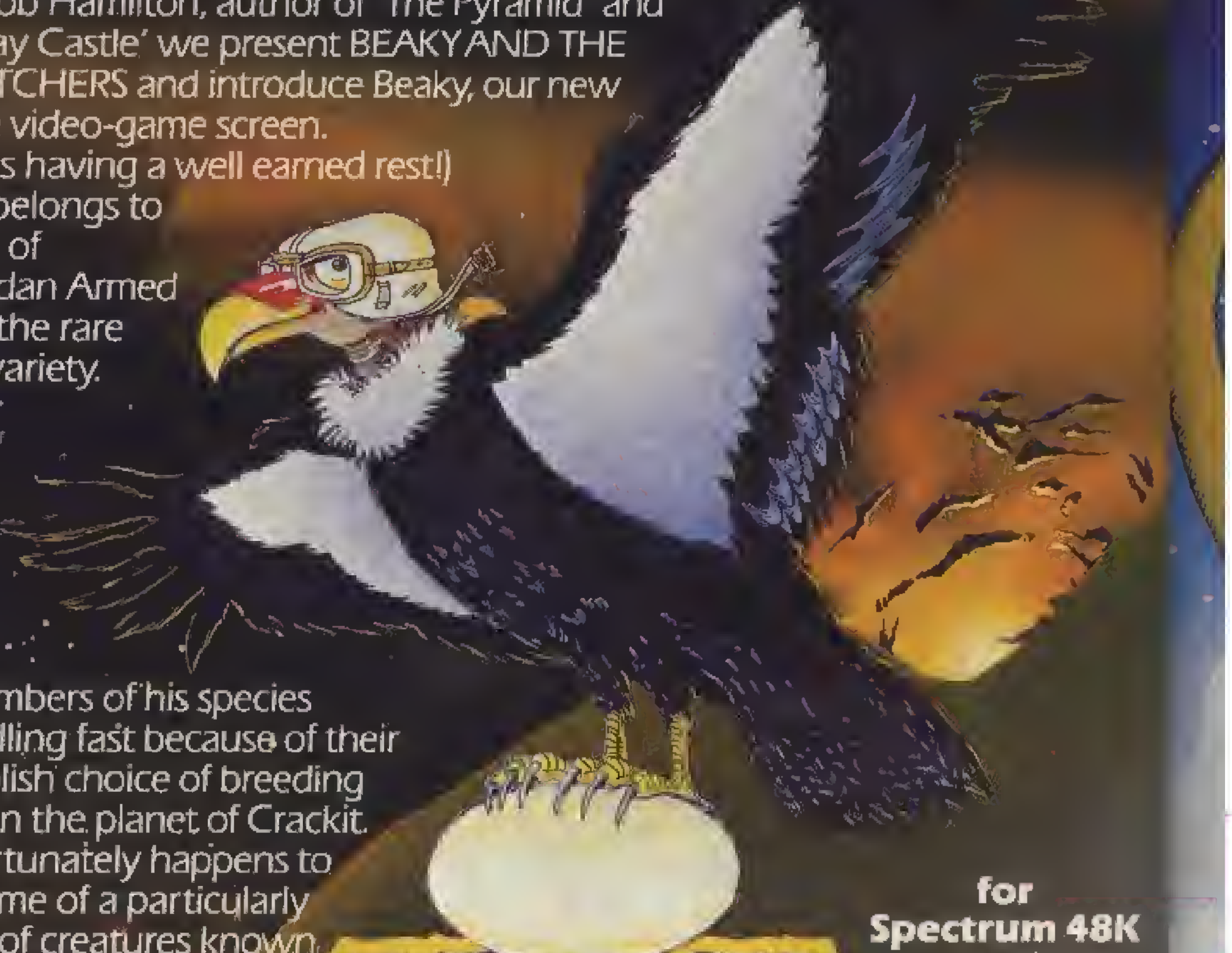

The numbers of his species are dwindling fast because of their rather foolish choice of breeding ground, on the planet of Crackit. This unfortunately happens to be the home of a particularly evil band of creatures known collectively as the Eggsnatchers. Their sole malicious intent in life is to extinctify Beaky's species by stealing or destroying the eggs by any foul means available.

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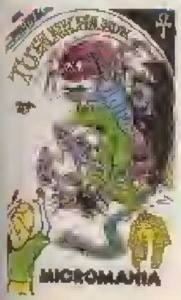
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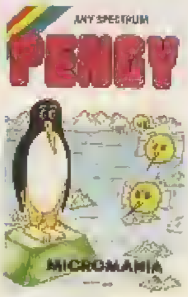
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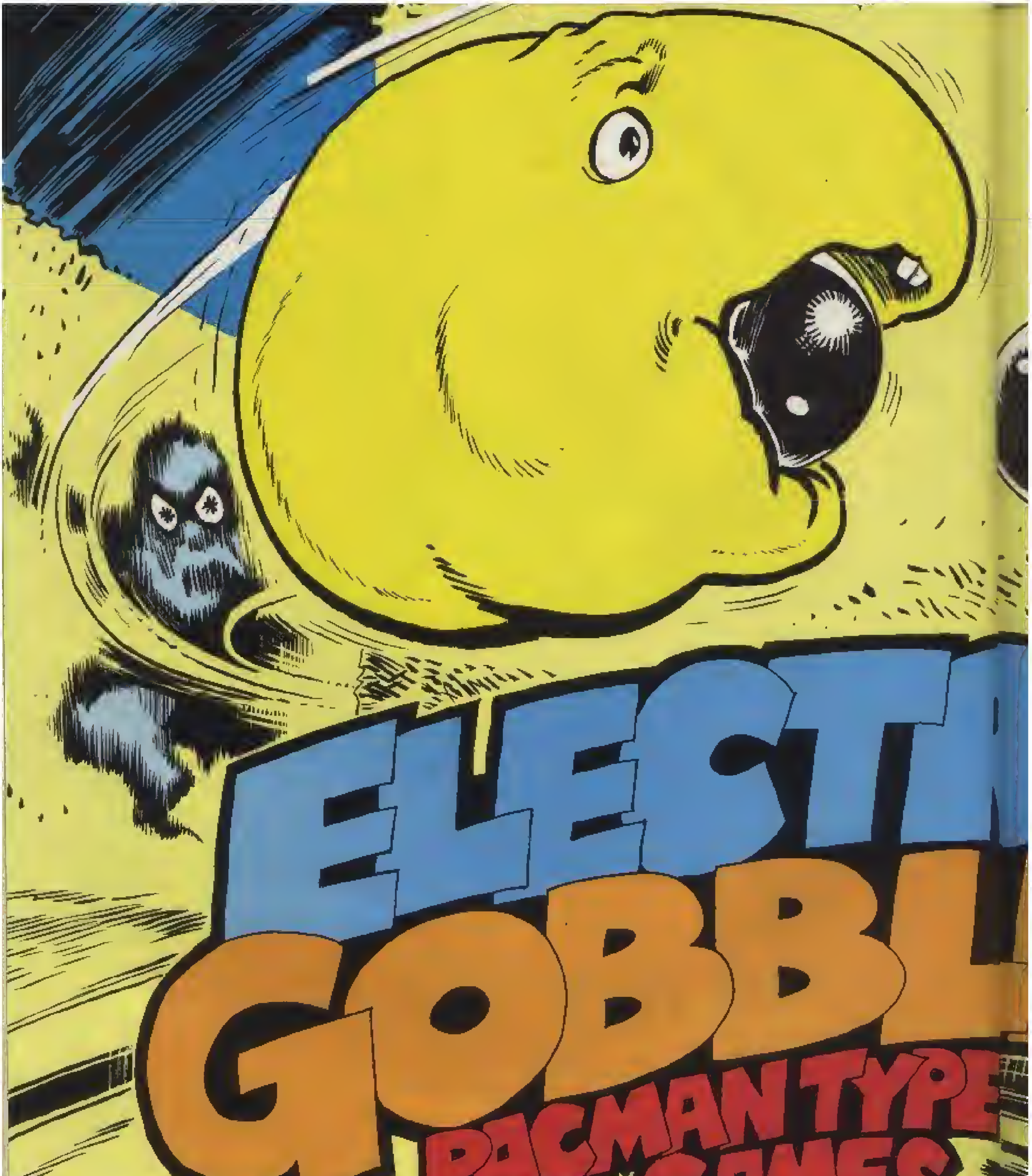

ELECT
GOBBL
PACMAN TYPE
GAMES

In our sixth comparison, reviewers CHRIS PASSEY and MATTHEW UFFINDELL snatch a glass of water and a handful of power pills and prepare to do battle with a legion of ghosts . . .

Pacmania came over from the States quite a while back. Initially the game was regarded as odd in that it was relatively non-violent for a computer game, but it rapidly established itself as the number one arcade favourite. Although the craze is over now, there are still a lot of pacfans around. As a classic maze game, Pacman was among the first arcade originals to be copied in numerous forms on to the Spectrum. Copyright owners, **Atari International**, have been promoting their expensive 'official' version since before Christmas, but it competes against some very strong 'unofficial' versions. some are good, some not so good, and there are some interesting variants.

In brief, the classic version should have a medium complex maze connected horizontally by a wrap around tunnel. In the four corners are a similar number of power pills. Each pathway of the maze is regularly dotted. In the centre is a 'home' for ghosts of differing colours and point values, which are released into the maze at intervals. The object is to take your Pacman, an orange ball with a gobbling mouth, around the maze and eat all the dots to promote to a more difficult screen with more intelligent ghosts. Eating a power pill will cause all the ghosts to turn blue and edible. In this condition they should run away from your approach at a slower speed than yourself. Strawberries appear at intervals and can be eaten for bonus points.

Ghost Hunt

P.S.S.

This gets off to a rather poor start because it uses the cursor keys for control – an obvious disadvantage with this type of game. Generally the graphics are small (one character size), okay, but not the true pacman size! The sound does bear a resemblance to a chomping noise. Such things included are fruit, tunnels and power pills. Overall, this is not a very impressive or addictive version, but not the worst you can buy.
CP

This game got off to a terrible start – there are no instructions whatsoever. Once loaded one

of the three skill levels has to be chosen, from easy to ultra-fast. Don't worry if you make the wrong choice – you merely have to reload the program. The graphics are small, very blocky and primitive. There is no gobbling action, but there are some odd looking fruit for bonus points. Sound and colour are generally poorly used, and the game isn't worth considering.
MU

Gnasher

R & R Software

We get off to a good start here with a nice loading screen (presentation is always a virtue). When the game started I was amazed! It includes a big, full-sized Pacman and set of ghosts – the only problem with this is that they are not as smooth and fast as they could be. The maze itself is a little simple but the general pacfeatures more than make up for this. For instance, you eat the ghosts (after a power pill) just like the real thing and their eyes even return home. The fruit is here too, plus some new ones like pears, all in excellent detail. All in all, this is a very close copy of the original, which I enjoyed. It is a shame that the movement is not just that bit better – but they have got it all into 16K too and included good key and joystick option.
CP

This version is much more true to the original with a large gobbling ball and ghostly looking ghosts. The maze is uncomplicated due to the big playing characters. The graphic characters move by the block, but this by no means spoils the playability of the game. Eating power pills changes all the ghosts to a deep blue and they start flashing when the power starts to wear off – good. Detailed fruit appear at random intervals to give bonus points when eaten. The sound and colour have been well used. The keys can be redefined and are very responsive. This game presents a difficult choice between itself and *Ghosts' Revenge*.
MU

Gulpman

Micromega

This was originally the **Campbell** *Gulpman*, which is now marketed by Micromega. It is a variation on the Pacman theme, which involves you in shooting the nasties. There are a large selection of mazes, speeds and skill levels. The graphics are small but smooth, but I think colour could be better used. On the subject of control, the keyboard is poor – cursor, but it does offer Kempston joystick. Generally this is a nice variation, playable, but for me not over-addictive.
CP

This must be one of the oldest pieces of software available on the market. Gulpman gives you a choice of 15 mazes which look very blocky, four chasers also of primitive character design, and incredibly, 81 skill levels ranging from unchallenging ghosts to super non-human ghosts. No power pills, but lasers defend you. Fruit and warp tunnels are non-existent. An ageing game, but with plenty of choice.
MU

Gobble a Ghost

C.D.S. Microsystems

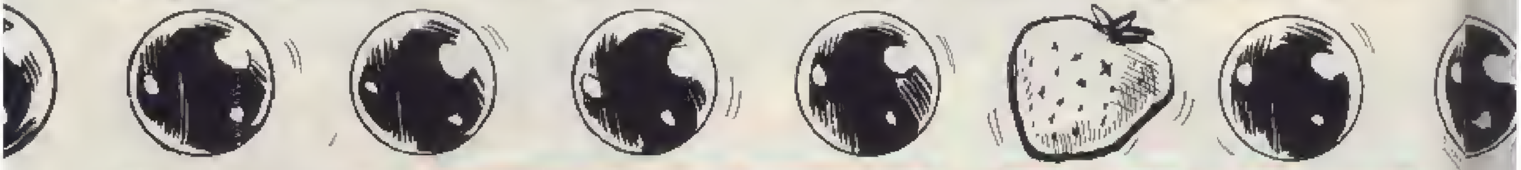
Gobble a Ghost is packaged very well. Looking at the cover, I thought, 'This could be the one.' Boy, was I wrong! The game is no way a close Pacman. It has poor graphics, no fruit and stupid ghosts. These poor spectres seem to like getting into a chain, making them easy prey after eating a power pill. Playability is not very high at all – an average to poor version.
CP

C.D.S. come up with a conventional style game but have failed in reproducing arcade-like moving characters. The maze is well drawn though. The characters are small but quite colourful. The ghosts give no indication that they are about to become invulnerable again after eating a power pill. The game plays quite well but the ghosts don't seem really eager to get you. Sound could have been better used but the keyboard play is quite good with fairly positioned keys that are responsive.
MU

Muncher!

Silversoft

Here the graphics are on the small side but at least they are pretty smooth. The maze seems very big (too big) making the pace a bit slow, and I don't think this is a very good version really. Although fruit bonus points are included both Pac and the ghosts have been changed (sacrilege!). The key layout isn't one of my favourites either. I didn't really enjoy



ELECTROGOBBLE
COMPARISON TABLE

		USE OF COMPUTER	GRAPHICS	PLAYABILITY	ADDICTIVE QUALITIES	VALUE FOR MONEY	MEMORY REQUIRED	RETAIL PRICE (£)
GHOST HUNT	**CP**	28	40	38	40	40	16	4.95
PSS	**MU**	24	37	34	35	35		
GNASHER	**CP**	80	80	85	85	85	16	4.95
R & R	**MU**	81	79	86	81	87		
GULPMAN	**CP**	40	50	55	40	50	16	4.95
Micromega	**MU**	37	52	49	42	48		
GOBBLE A GHOST	**CP**	50	35	32	30	32	16	5.95
CDS	**MU**	51	32	29	25	25		
MUNCHER!	**CP**	40	45	25	15	17	16	5.95
Silversoft	**MU**	50	58	30	31	38		
GHOSTS' REVENGE	**CP**	85	95	80	85	85	16	5.95
Micromania	**MU**	87	96	82	78	86		
MAZE CHASE	**CP**	25	25	15	10	20	16	4.95
Hewson Cons.	**MU**	28	20	12	7	15		
HUNGRY HORACE	**CP**	70	75	80	75	78	16	5.95
Psion	**MU**	67	71	69	62	60		
HAUNTED HEDGES	**CP**	80	70	63	65	68	16	6.95
Micromega	**MU**	70	62	50	49	60		
GOBBLEMAN	**CP**	40	28	30	25	25	16	4.95
Artic	**MU**	39	25	22	20	20		

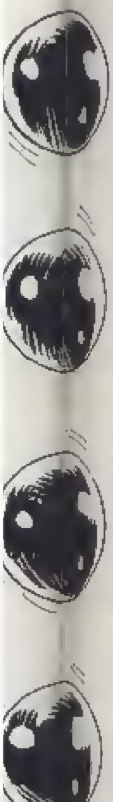
Please note that the percentages given in this table do not reflect what the game might or did get in main review and should only be seen in relationship to each other

this one – mind you, it's getting on a bit now!
CP

With this particular version it can take up to five minutes to eat up all the dots in the maze, not because the game is slow but because the mazes are so large and complex. The characters move smoothly and are quite colourful but small. Power pills have the usual effect of turning ghosts edible. A warp tunnel is included. As the game progresses the speed increased dramatically until the game is totally unplayable. Not the best, but very fast.
MU

Ghost's Revenge

Micromania



Good controls, joystick options and large, almost full-sized pacgraphics which are smooth too – YES, I'm telling the truth. This has the best character movement around the maze. It also includes some new features like invisible mazes. Tunnel and power pills are included but, alas, no fruit. Micromania don't seem to have attempted a direct copy version but have produced a fresh variant. Although I say that, I would like it to have the original features too, but once cannot have everything.
CP

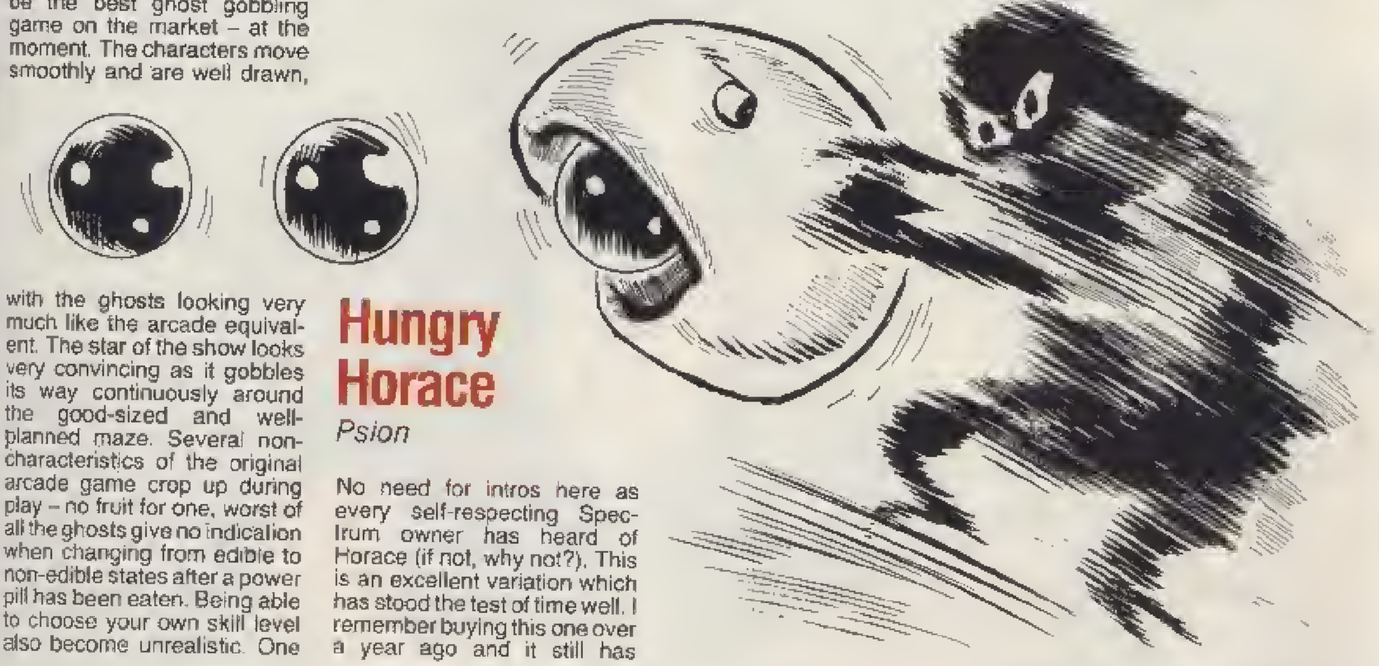
The first impression this version gave me was that it must be the best ghost gobbling game on the market – at the moment. The characters move smoothly and are well drawn, with the ghosts looking very much like the arcade equivalent. The star of the show looks very convincing as it gobbles its way continuously around the good-sized and well-planned maze. Several non-characteristics of the original arcade game crop up during play – no fruit for one, worst of all the ghosts give no indication when changing from edible to non-edible states after a power pill has been eaten. Being able to choose your own skill level also become unrealistic. One feature this version has that no other does is the invisible maze – just to make life a little more difficult. Both colour and sound have been put to good use, tunes adding a nice intro to each new-life screen. The keyboard is just right. A very good version, but it would be difficult choosing between this and the R & R version.
MU

Maze Chase

Hewson Consultants

Poor graphics, unexciting and unaddictive seem the words to sum up this one. The graphics are small, undetailed and lacking in colour. Control is with the cursors to make things even worse. It didn't appeal at all – the less said the better. (Sorry Hewsons!)
CP

Like a lot of these games, this version is quite old, and it shows. It is very primitive with its design and graphics. The maze is exceptionally complex, with the odd lemon positioned randomly in it. Power pills, too, appear randomly placed. Ghosts move about the maze not caring at all whether you eat the dots or not. The game does have 12 different mazes, but the terrible cursor keyboard layout is quite unresponsive – if not positively erratic. Can't be recommended apart from historical interest – *Maze Chase* to *3D Lunattack* – there's encouragement for you!
MU



Hungry Horace

Psion

No need for intros here as every self-respecting Spectrum owner has heard of Horace (if not, why not?). This is an excellent variation which has stood the test of time well. I remember buying this one over a year ago and it still has appeal. Some details like the 'finishing' of the maze are a little bit primitive by today's standards, but this still outdoes many newer games. If anyone has not got *Hungry Horace* – get it!
CP

Horace cannot be called a traditional Pacman game – there are no ghosts for a start off, just park guards which multiply after a set time. The three mazes are very simple indeed, though quite well drawn. Power pills don't exist either, instead there is an energency alarm bell. Ringing the bell will cause the guards to freak, allowing you to throw them out of the park. The characters are well drawn and move smoothly. Colour and sound are well used. Totally different from the arcade version.
MU

3D Haunted Hedges

Micromega

This is a fairly original game. The maze has been turned into a 3D maze using colour. It is quite realistic too. The man runs behind hedges so that only the top half of him can be seen. Bonus features apart, this is basically a Pacman type game and it's a reasonably good one too. The game offers user-definable keys; it's playable but I still prefer the fruity original. Nonetheless this is a good version.
CP

The only 3D maze game out of the bunch, essentially everything else is the same – ghosts chase in a hazardous sort of way, power pills aid your task. The differences are the 3D effect and 'you' are a real running, but small, man that walks over the dots. Sound and colour are average. I didn't really like the 3D effect maze, but the game itself plays averagely. Novel.
MU

Gobbleman

Artic

Like most of the really early versions, Artic's has small and rather uninteresting characters of a small size. Power pills but no bonus fruit in this fast game. Generally pretty uninspiring.
CP

Artic first produced *Gobbleman* for the ZX81 – it played a very vicious game even then. This version is even faster. The maze is nicely drawn and is quite complex. The characters are small and quite insignificant compared with the size of the maze. Eating power pills causes the ghosts to pulsate – not a very good effect. No fruit appear at any time, having included them would have helped the game along a bit. Colour and sound is not at all well used, although the keys are well positioned and responsive.
MU

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A Crash Smash

Factory Breakout

Producer: **Poppy Soft**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Author: **Steve Crow**

Aliens have been blamed for a lot of things since Space Invaders replaced Tank Pong and Tennis as a video game, but they haven't usually been blamed for causing strikes. In this new game from Poppy Soft, alien monsters have activated the self-destruct mechanism of the X-IAL robot factory. So all the other robots have gone on strike and only Zirky is left. Can you help him evade the monsters and break out of the factory?

The game has three different screens and gets harder with each successfully completed go. In the first, Zirky is in his egg capsule at the centre of the screen. The factory's self-destruct mechanism is already firing deadly laser beams at him from seven directions. The rays progress slowly, giving him time to swivel round to each in turn and fire back with his defence laser. This stops the deadly rays for a moment only. Below him, a column of energy is rising up under the egg – when it reaches him, Zirky is saved, and transported out as a fully fledged Zirconium Mk III robot.

Sadly, his transportation leads him on to the rejection line, where five overhead lasers keep firing. Zirky must pass them all safely. Each laser is made up of three vari-coloured beams, white being the fastest. If he spends too long in the rejection chamber a killer canary comes up to get him. In later screens this chamber may have conveyor belts.

The third screen is a platform type with seven levels. On the top six there are two or three connecting doors to the next level down. A lift on either side of the platform complex takes Zirky up. He can exit at only two (different) levels on either side before reaching the top. Three monsters (on the first screen) inhabit this area and chase Zirky like mad. The idea is to change the colours of all the doorways by passing through them. This has to be done three times. At the ends of some corridors there are force fields, rather like power pills in a Pacman game, once eaten they disappear but allow you to kill off the monsters for a few moments.

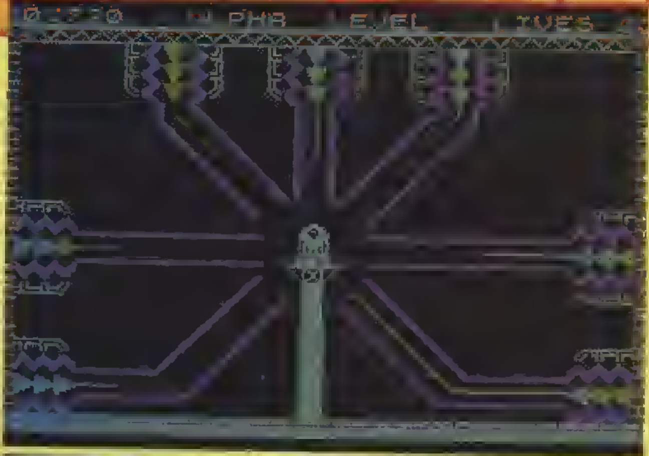
It all sounds quite simple, but on later levels, things are deteriorating in the factory – conveyor belts start up, not all in the same direction at the same time either – monsters are on the increase – in fact it begins to look like a normal day at any British factory.

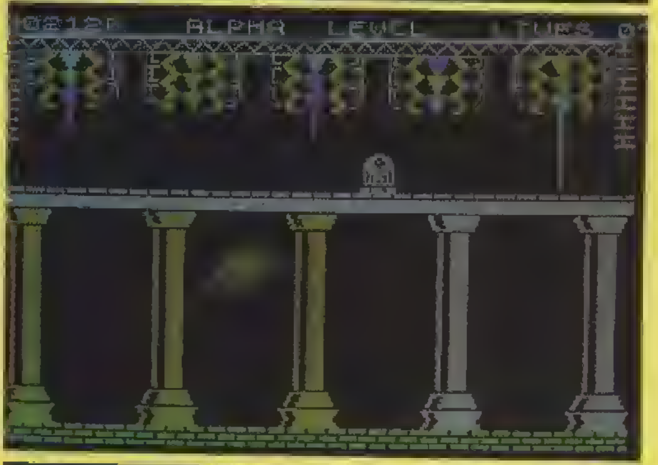
CRITICISM

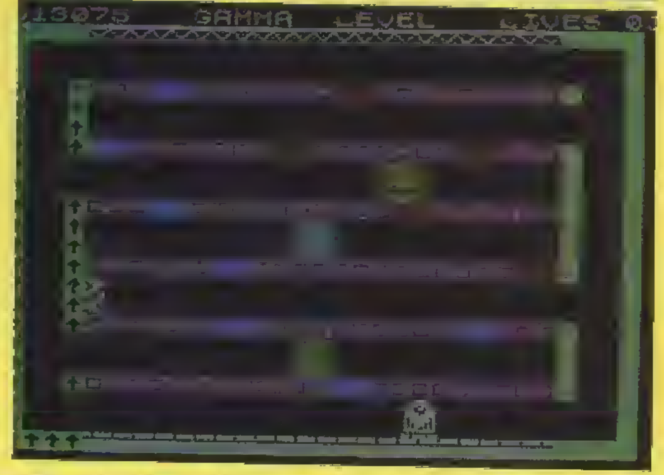
● 'Brill! *Factory Breakout* is one of the best Spectrum games I have seen over the past few months. It contains colourful, smooth graphics, its got some pretty original ideas included and I really enjoyed it. This game will definitely be a winner in the Spectrum market and I would strongly recommend it for a game of the month – in fact MEGABRILL!'

● *'The graphics are of a high standard – in a way quite simple shapes, but imaginatively designed and ultra-smooth. There are nice touches like the mirror image of the ground over which Zirky travels. The skill level of the game has been really well pitched, with the easiest (Alpha) level still being very hard for the first few plays. The game demands a high degree of skill and timing, and because of the three very different screens, each type of skill is varied. Very playable and very addictive.'*

● 'Basically this game includes three different types of game, each of which requires a different talent to get through them, each of them being excellent as well. Graphics are large and very smooth, not flickering one little bit. Aliens are well animated and are progressively more intelligent – I think they learn by their mistakes! The keyboard is nicely laid out with few controls (it's cursors, but only 5 and 8 are used for direction) and they are responsive. Sound is well used where appropriate and there are nice tunes. *Factory Breakout* is playable and very addictive with a good progression between skill levels so it builds up with your skill. A great game which I don't think will ever age.'





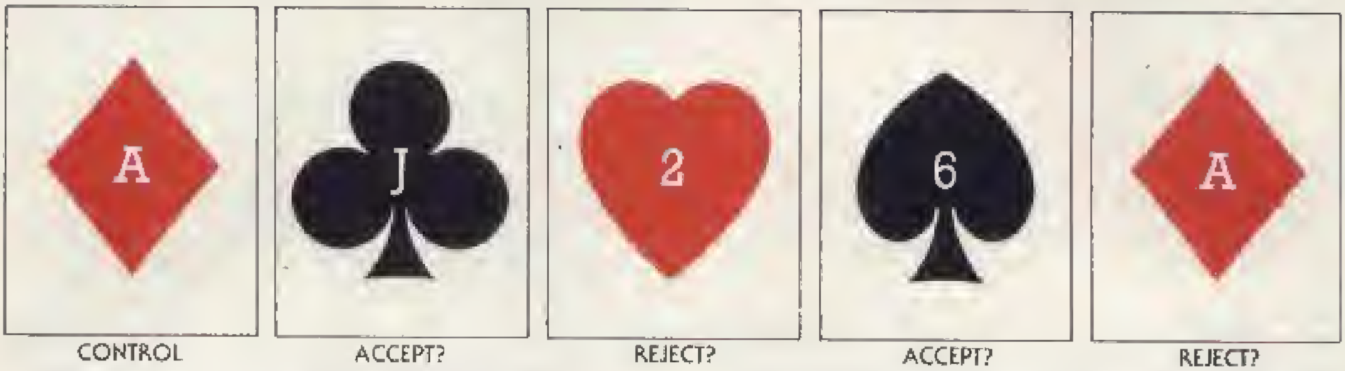


COMMENTS

Control keys: 5/8 left/right, 0 to fire
Joystick: Protek, AGF and Kempston
Keyboard play: simple keys and responsive
Use of colour: very good
Graphics: excellent
Sound: very good
Skill levels: progressive through 5 levels
Lives: 3
Screens: 3
Originality: highly original ideas
General rating: addictive, playable and highly recommended.

Use of computer	85%
Graphics	89%
Playability	92%
Getting started	85%
Addictive qualities	91%
Originality	94%
Value for money	92%
Overall	90%

E·N·I·G·M·A Can you break the code?



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The Dungeon Builder

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The Computer Cook Book

BUG-BYTE
By Ian Hoare
The Computer Cook Book
TM
MENU PLANNER
48K Spectrum

Producer: **Bug-Byte**
Memory required: **48K**
Retail price: **£9.50**
Author: **Ian Hoare**

In some recipe books it tells you how long to allow for preparation time of the dish.. With *The Computer Book*, the first of its kind, you had better allow a few extra minutes per pound as the data takes a while to load.

The package comes as two cassettes, a **Menu Planner** tape and a **Recipe tape.** The recipe tape uses both sides of the cassette. On side one there are 20 Starters and 20 Main Courses, and on side two there are 20 Desserts, 20 recipes for vegetables and 5 recipes for odds and ends like mayonnaise and fish fumet.

Computer cook books may well be very useful, especially so if you have one of those ultra-modern kitchens with a plumbed in Spectrum and monitor, but one thing this program lacks is the mouth-watering colour photographs of dishes designed to get your culinary skills going. Perhaps the advantage to the non-computing mum (there seem to be less and less of these around nowadays) is that because this is computer cookery, she can get the alien-zapping son to do the cooking from now on.

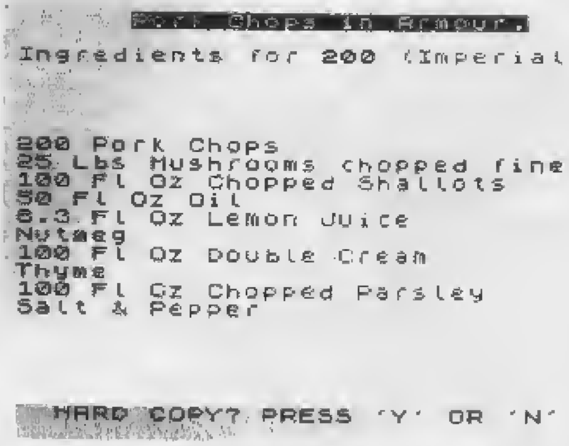
Any recipe book must stand or fall by the recipes contained in it. The author, **Ian Hoare,** is a noted chef to British Routiers, and the program notes claim that the recipes are well tried and tested – indeed even favourites of Mr Hoare's customers, so they can be used with confidence. The starters section includes standards like Avocado with Crab, French Onion Soup and Scampi. It also has a few exotics like Gulyas Soup or Whiting a Verdurette. Similarly, the Main courses are well selected from Beef Bourguignon through Elizabethan Pork to Choucroute Garnie. The desserts range from Jam Pockets through Vacherin to Zuppa Inglese (trifle).

Using this section is quite simple and the program is reasonably user-friendly, with one startling exception. A numbered menu (no pun) allows selection of the particular section,, e.g. Starters or Main Courses; information in a box explains how to get a hard copy if you have a printer, and then a yellow box states, 'Q to quit, any other key to continue.' Pressing any other key, however, will result in varied on-screen abuse explaining that you are an idiot! Below the yellow information box is another set of text which merely says, 'To remind yourself of the title PLEASE PRESS 1, 2 or 3.

This is a roundabout way of confusing the novice computer cook. You cannot just press any other key, but only the appropriate numbered key.

Anyway, selecting a section results in a neat dissolve to the 20 recipes. Any may be chosen by pressing the appropriate letter key. You are then asked to input the number of guests being fed, and here is one of the *Computer Cook Book's* great strengths – the recipes can be shown with the required ingredients for between one and 200 diners. (Did you know that Chocolate Mousse Basquais requires 15lb plain chocolate and 120 eggs to feed 200?). The ingredients are listed and a hard copy may be made for shopping list purposes. A key press then reveals the method of preparation and cooking with helpful hints also available at a key press. This too may be sent to hard copy. Before returning to the main list, the ingredients may be seen again.

In most respects this works very well. I was only disappointed to be informed that the cooking method for Coq au Vin was the same as for Beef Bourguignon, which meant wading through the menu again. It should have been possible to repeat the instruction, surely, for the selected dish.



```
Pork Chops in Armour.
Ingredients for 200 (Imperial)


200 Pork Chops
25 Lbs Mushrooms chopped fine
100 Fl Oz Chopped Shallots
50 Fl Oz Oil
8.3 Fl Oz Lemon Juice
Nutmeg
100 Fl Oz Double Cream
Thyme
100 Fl Oz Chopped Parsley
Salt & Pepper



HARD COPY? PRESS 'Y' OR 'N'
```

MENU PLANNER

The second tape is the cookbook's index with five sections. Section one sorts things out – dishes from a particular country, dishes by ease of cooking, dishes by price, dishes by time of preparation. You can also see a list of the recipes, all the ingredients used in the recipes and pick an ingredient, say Celery Seed, and find out what recipes it is used in. One section will suggest wines to accompany meals. This is done by first asking whether the wine is to go with starters, main courses or desserts. Choosing then leads you to the recipe list, where you can tell the computer which dish the wine is to accompany. The result is a first offer and a cheaper alternative. Some of the wines are extremely expensive.

A useful section is the Store Cupboard, which allows the computer to sort through the recipes and find out if there's one which will use up whatever you may have lying around. It has some oddities, however. Since the sort is only done from a basic list of ingredients used in the program, I was surprised to see that red cabbage cropped up nowhere in any recipe – so why was red cabbage listed in the first place? Trying in desperation to find something to do with the wretched stuff, I pressed for a search through Desserts. As I expected there was no recipe, but the computer must have become confused as it printed out, "d COPY e?Cabbage – sorry, there are no recipes using d COPY E£Cabbage in this section."

It was obviously a firm reminder that I should write my own dessert recipe based around red cabbage.

CONCLUSION

For what you get (60 main recipes) this package is reasonably priced. I wonder how many cooks will actually have a Spectrum in the kitchen, but it isn't necessary with the hard copy facility, and in this respect the program is friendly to use. It is possible to buy cheaper books with more recipes in, but I hope the *Computer Cook Book* does well, not because it is invaluable, but because it points the way to better things in the future.

Roger Kean

PLAYING TIPS

Since last month's issue, letters and several phone calls have flooded in with playing tips and counter arguments. For instance, the reader who wrote in saying he had found a trailer from the Moon Rover on a particular level of *Lunar Jetman*, caused a few raised eyebrows. A caller said he had reached level 25 in a desperate search for the trailer, but there was no sight of it. On contracting Ultimate he was told that they had wanted to put a trailer in but there hadn't been room left in the program – so it looks like someone has a good imagination. Anyway, on to your tips . . .
LM

WHEELIE/ATIC ATAC

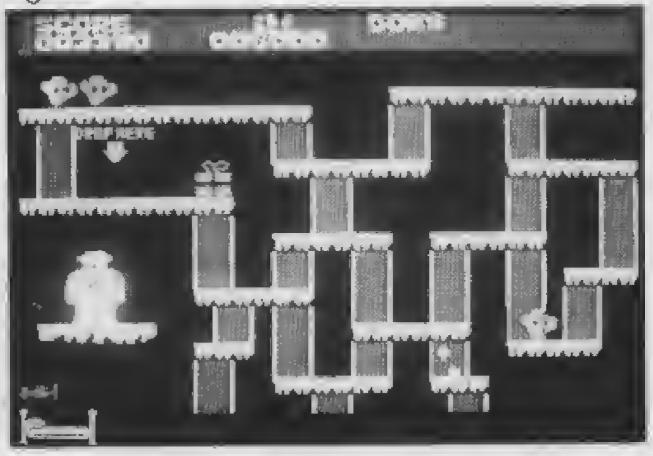
Firstly, **Richard Leadbetter** stated that in ***Atic Atac***, the green key is always on the level you start on. This is not true as I have found it on the floor above. Secondly, here are the first eight codes for *Wheelie*: 2 WITTY, 3 SHARK, 4 BEBOP, 5 XENON, 6 ZX83B, 7 2MQL3, 8 HRME2.

Ewan Lithgow (14), Dumfries.

SNOWMAN

When you are after an object and it's in an awkward position (eg on the far right), all you have to do is go to the very bottom of the screen and walk along to the far right ladder, wait until the gas flames are on the left or in the middle, go up the ladder and get the object, then go back to the bottom line. The monsters will never go along the bottom because they can't. Keep doing this until that level has been done. After stage four there is a different screen layout.

Richard Johnson (15), Worksop, Notts.



JETMAN HOLES

J.U. Flattery's methods for getting across the holes in *Lunar Jetman* may be safer but it is significantly slower and makes the game more dangerous later on that level when you have to destroy the missile with laser fire, which has been launched because you have taken up too much time. It's better to practise laying bridging units, which also have the advantage of being there later, instead of having to recross holes. One of the best games I have got is *Jet Set Willy*, but could somebody tell me how to get the items in the Conservatory Roof?

John Curtin,
Skelmersdale, Lancs.

There's obviously a serious problem in getting Conservatory Roof objects in an honest way. However **Peter Young, Christian McGuiness** and **Paul Henderson**, all of Slough, rang to tell me this interesting POKE. Type in **POKE 34785, n** (n = 45 at best). I have to say now that I haven't had time to try this one out yet, but it's supposed to build bridges in space so you can jump Willy across. Goodness knows if it works!

JET SET WILLY ATTIC POKES

Still on the Manic problem of JSW, Software Projects have announced the winners of their competition for the first to complete and get to bed. They are CRASH readers **Ross Holman** *and* **Cameron Else** *of London. Ross and Cameron have also worked out how to get around the problem of the Attic – so successfully in fact that Software Projects have allowed publication of the POKES required to overcome the bug:*
Enter **MERGE ""** *and press play on cassette. Once the first part has finished loading, stop the cassette and enter:*

```
CLEAR 32767
LOAD ""CODE
```

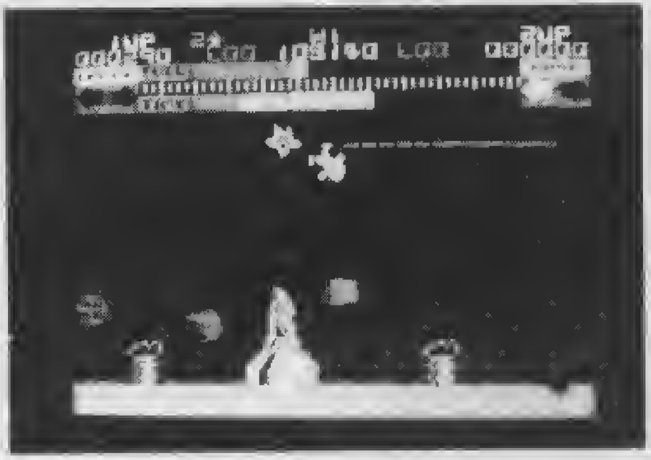
Start the cassette again and after the main part of the program has loaded enter:

```
POKE 60231,0
POKE 42183,11
POKE 59901,82
POKE 56876,4
```

If you would like to save the new version of Jet Set Willy, prepare a blank tape and enter:

```
SAVE "JETSET"LINE 10
SAVE "JSW"CODE
32768,32768
```

If not, to play the new version enter; **GOTO 40**
This routine will stop the chain of events which occurs the second you enter the Attic screen and which causes isntant death in the four famous locations!
LM



UNKNOWN VOYAGE

Are there any readers who have an arcade game called *Voyage into The Unknown*? It's by a new firm called **Mastertronic**. If so, could they give me information on how to pick up objects with the robot arm and where to go after being forced down by a tractor beam?

Jeremy Smith,
Kidderminster, Worcs.

ANDROID 2

I have found out how to get all the time you need and as many men as you want. All you have to do is, in the first clearing kill yourself four times then go to a place where a monster goes over a mine. Then try to walk on to the mine at the same time as the monster. If you time this right you will be killed two times more, making a total of six hits on yourself. Now, due to a bug in the program, you have as many lives as you want and all the time in the world.

Kevin Allen,
Weston-super-Mare.

ANT ATTACK

If you go out into the desert, you might find an Ammo Dump . . . I will say no more.

J. Parker,
Brighouse, W. Yorks.

BETTER SOUND

It seems common practice for software houses to state that the sound may be improved by connecting the Spectrum's mic socket to your tape recorder's and pressing Play with no cassette in it. But stereo headphones can be used to amplify the Spectrum's sound. This is a considerably better technique as the sound is louder and no one else has to listen to it.

Anon, Water Orton, Birmingham.

MONSTERLESS JSW

If you would like to run around JSW's mansion without monsters *(sounds a bit boring to me),* **S. Watson** *of Greenlees Estate, Cambridge, says skip the first part of the program then enter:*

```
10 CLEAR 25000: LOAD
""CODE
20 FOR A = 43780 TO 45823:
POKE A,0: NEXT A
30 FOR A = 46060 TO 49151:
POKE  A,0: NEXT A
40 POKE 35899,0: (The infinite
lives Poke)
50 BORDER 1
60 RND USR 33792
RUN
```

Again, I haven't had time to check this out (someone ran off with my copy of JSW).
LM

CHEQUERED FLAG

You can overcome the problem of low performance after hitting glass by keeping your finger down on the accelerator, but changing gears right down to first. The track still seems to wobble, but the car's performance is unimpaired. This saves a time-wasting trip to the pits.
Murray Pope, West Linton.

JUMBLY

For anybody with a copy of *Jumbly*, try these titles: NURSERY, FLIGHT, PLANS, WINDOW, VERSE and VERTIGO. Will someone please do a version of *Galaga* for the Spectrum! Danny Balcomb and Paul Hirst, Acomb, York.

JET SET JUMPS

Having waded through literally hundreds of letters with the infinite lives Poke for JSW (!), I came across this one, and I promise – it's the last POKE for this month! It comes from **Stephen Punshon** *of Peterlee, Co. Durham, and is* **POKE 36353,44.** *What it does (quick burst of laughter) is allow you to get sucked up a left-hand wall if you jump from underneath! If you walk and jump into the wall, you jump twice as high as usual (useful for the Nightmare Room).*
LM

FIGHTER PILOT QUERY

In *Fighter Pilot*, when you examine the map, there are tiny little dots dotted around it. Upon closer examination from the cockpit at 27 feet, I noticed that they were in fact what looked like miniature runways. Please, could anyone tell me what they are?
Laurencde Hoff, Four Marks, near Alton, Hants.

PUSH OFF

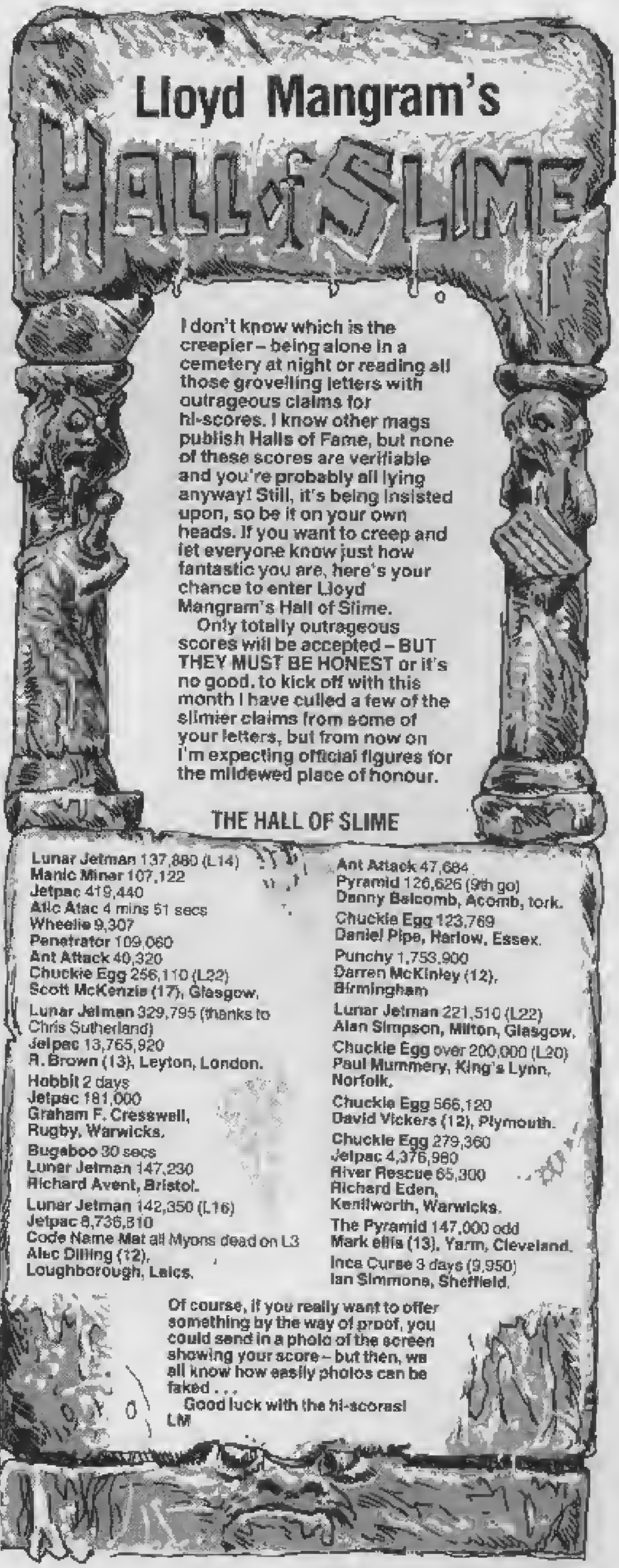
I have read about the difficulty of loading *Push Off* by Software Projects. After many hours of experimenting with the command CLEAR, I have found that the program can be used in 16K. Before loading the line **CLEAR 24001** must be input. Then load as usual and the game won't crash.
C. Donegan, Leeds, W. Yorks.

Keep the playing tips coming in. If you are writing to me for the CRASH FORUM, it would be best if you kept any tips separate in your letter rather than incorporating them with the main letters, as it makes sorting much easier. Lots of writers have been asking for a HALL OF FAME . . . read on . . .

4300
Score
Level 3
50000
Hi-Score

POGO SPEAKS ⇧

I wonder if you know about the added bonus in *Pogo* by Ocean. If you are lucky enough to own a Currah Microspeech unit you will find that *Pogo* speaks, even though nothing is written about it on the cassette. The snake hisses at you as well as saying, 'slither' and 'squirm'.
Darren Muir, Enfield, Middx.



Lloyd Mangram's

HALL of SLIME

I don't know which is the creepier – being alone in a cemetery at night or reading all those grovelling letters with outrageous claims for hi-scores. I know other mags publish Halls of Fame, but none of these scores are verifiable and you're probably all lying anyway! Still, it's being insisted upon, so be it on your own heads. If you want to creep and let everyone know just how fantastic you are, here's your chance to enter Lloyd Mangram's Hall of Slime.

Only totally outrageous scores will be accepted – BUT THEY MUST BE HONEST or it's no good. to kick off with this month I have culled a few of the slimier claims from some of your letters, but from now on I'm expecting official figures for the mildewed place of honour.

THE HALL OF SLIME

Lunar Jetman 137,880 (L14)
Manic Miner 107,122
Jetpac 419,440
Atic Atac 4 mins 51 secs
Wheelie 9,307
Penetrator 109,060
Ant Attack 40,320
Chuckie Egg 256,110 (L22)
Scott McKenzie (17), Glasgow,

Lunar Jetman 329,795 (thanks to Chris Sutherland)
Jetpac 13,765,920
R. Brown (13), Leyton, London.

Hobbit 2 days
Jetpac 181,000
Graham F. Cresswell, Rugby, Warwicks.

Bugaboo 30 secs
Lunar Jetman 147,230
Richard Avent, Bristol.

Lunar Jetman 142,350 (L16)
Jetpac 8,736,810
Code Name Mat all Myons dead on L3
Alec Dilling (12), Loughborough, Leics.

Ant Attack 47,684
Pyramid 126,626 (9th go)
Danny Balcomb, Acomb, tork.

Chuckie Egg 123,769
Daniel Pipe, Harlow, Essex.

Punchy 1,753,900
Darren McKinley (12), Birmingham

Lunar Jetman 221,510 (L22)
Alan Simpson, Milton, Glasgow.

Chuckie Egg over 200,000 (L20)
Paul Mummery, King's Lynn, Norfolk.

Chuckie Egg 566,120
David Vickers (12), Plymouth.

Chuckie Egg 279,360
Jetpac 4,376,980
River Rescue 65,300
Richard Eden, Kenilworth, Warwicks.

The Pyramid 147,000 odd
Mark ellis (13), Yarm, Cleveland.

Ince Curse 3 days (9,950)
Ian Simmons, Sheffield.

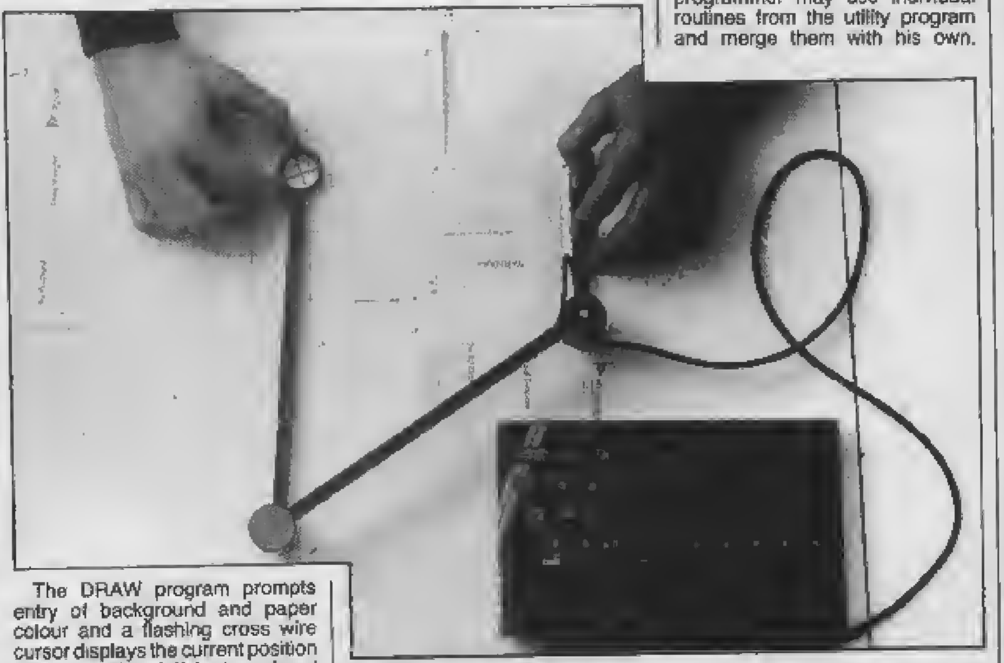
Of course, if you really want to offer something by the way of proof, you could send in a photo of the screen showing your score – but then, we all know how easily photos can be faked . . .

Good luck with the hi-scores!
LM

Faced with the problem of copying an existing drawing, pattern or map on to the Spectrum TV screen, there would be little hope of a fast and simple job. Drawing grids, listing coordinates, rescaling and inputting either via suitable software or via light pen could simply take hours. Unless of course an RD DIGITAL TRACER were at hand.

MAKING AN IMPRESSION

Franco Frey



CONSTRUCTION

The tracer consists of a double jointed arm with a hair cross sight at its end. The knee joints contain potentiometers which detect in combination with the supplied software the exact location of the hair cross in reference to the tracers base. The tracer interface unit does not inspire confidence, in fact the enclosure is constructed out of a standard cassette box and certainly doesn't reflect the high cost of the unit. Nevertheless the tracer performed immaculately throughout the test and proved reliable.

INSTALLATION

The tracer can reach a maximum tracing area of 300 x 300mm using automatic scaling, but the nominal area is 256 x 176mm for normal draw mode. The base is fitted in position with a clamp or with the double-sided adhesive strip supplied. A template is provided for positioning the tracing sheet grid in the correct location. The interface of the tracer is plugged into the back of the Spectrum (with the power supply disconnected!) or into the extension port of the printer edge connection. The software cassette DT2 is loaded and the system is ready.

SOFTWARE

The cassette contains five programs:

DRAW All general purpose draw features including outline paint and copy.

SCALE The drawing is transferred to screen scaled up or down, reversed left to right and upside down and repositioned.

RETRACE Stores a string of drawing commands and coordinates for later retracing. In practical terms this means that it stores an outline drawing which can be recalled repetitively.

GRAPHICS Sets up an array of user defined graphics

COMP Comp 48 includes all four above progams. Comp 16 includes DRAW, SCALE and RETRACE.

RETRACE, SCALE and GRAPHICS must be run from within DRAW and must therefore be merged with DRAW.

The DRAW program prompts entry of background and paper colour and a flashing cross wire cursor displays the current position of the trace head. If the trace head is moved out of the tracing area, a warning BEEP will sound. A large or small or invisible cursor may be selected. Border, paper and ink colour changes, screen clearing, display of colour character grid, line erasing within character square, etc, facilitate the production of the drawing. Drawing can be accomplished either in normal mode by holding down key W (pen down) or in continuous mode (toggle key C). Pressing key E will create thick lines, while key Q plots single points.

Special drawing functions are provided including straight line, quarter, half and full circle, rectangle and right angles. All these facilities permit rapid production of complex outline drawings. For area filling four different functions are available:

key g	paints solids
key F	hatches (alternate horizontal lines)
key D	hatches (every third line)
(Sym) M	Toggles shading limits (shading to edge)

Text may be printed using key P for normal, key M for inverse and key V for flash after positioning the cursor at the desired print position. The screen display may be copied on the printer or saved on cassette at any time and recalled at a later date from within the DRAW programme for further modification.

SCALE

When operating the tracer with DRAW the drawing on the tracing sheet is transferred with a fixed nominal scale of 1mm to 1 pixel. With the program SCALE the display image may be moved up and down, left and right, scaled up and down, reversed left to right and turned upside down or any combination of these. Automatic scaling can be achieved by:

Figure entry mode: by inputting the coordinates of the desired rectangle on the screen. Upon completion the cursor will move only within the confines of this rectangle when moving the tracing arm across the entire nominal tracing area.

Drawn entry mode: The four coordinates are input automatically by the screen cursor. By indicating the lower left and upper right position with the screen cursor, the required area rectangle will be displayed temporarily or permanently.

Single point entry: Inputing a scale factor and positioning the trace head at a reference point on the drawing to be traced. The x and y coordinates may be read and input.

RETRACE

The program RETRACE stores consecutive points from the tracer, the x and y coordinates and the key pressed being stored in a string array. The program allows to trace many outlines, stores at different points in the array and to recall any one in particular commencing the retrace at the appropriate sample number. Up to 5,000 samples may be stored on a 48K Spectrum or 500 with a 16K memory.

GRAPHICS

DRAW enables text to be printed normal inverse and flashing including standard graphic symbols or UDG's. With GRAPHICS a new character set may be generated and saved to tape for later use. The current character set is displayed. Entering the letter to be changed the 8 x 8 dot matrix is displayed and the character may be redesigned with the use of keys 1 and 0. If an error is made while generating a line of the character it is possible to return to the beginning of that line.

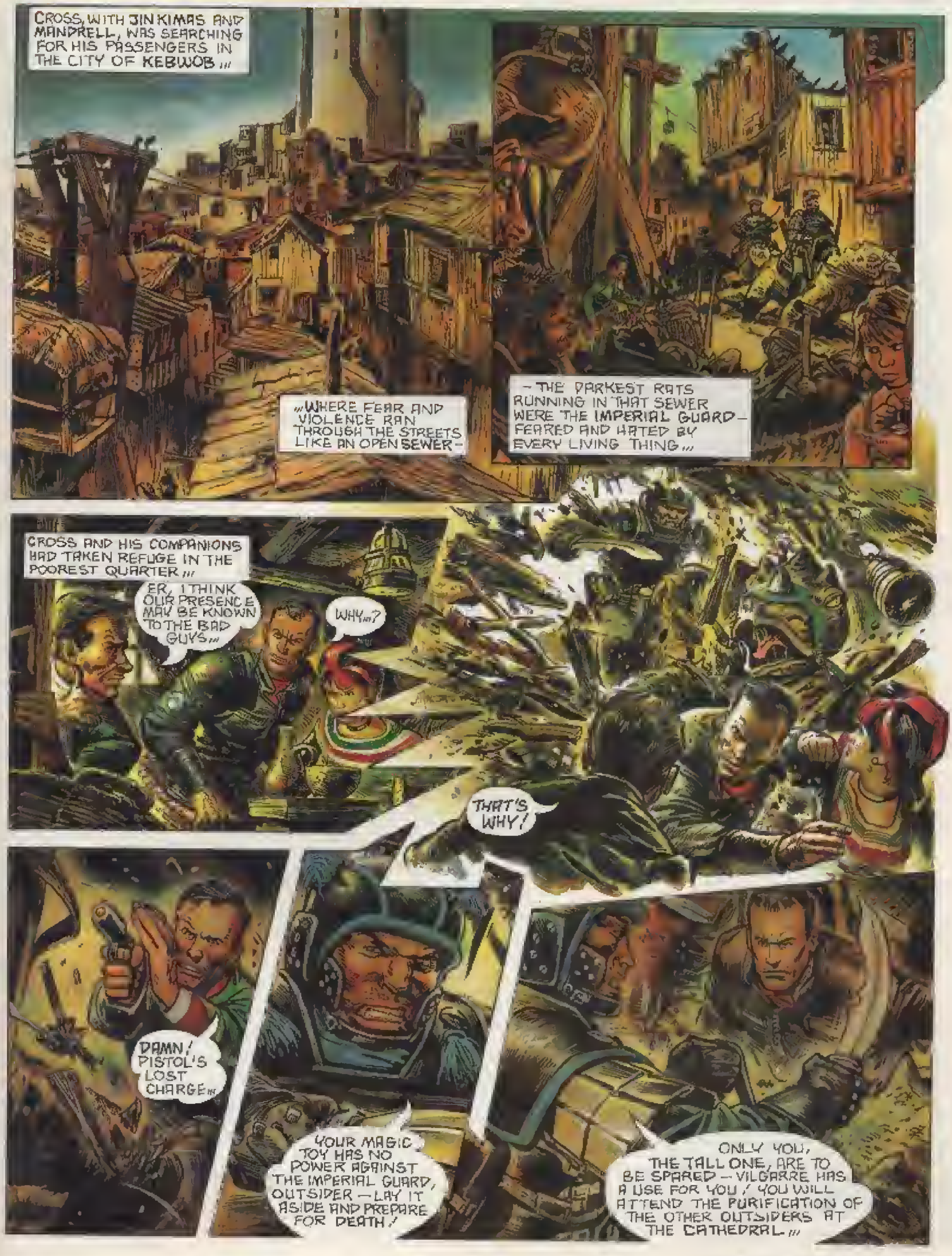
The programs SCALE, RETRACE and GRAPHICS must be merged with DRAW to operate. However the composite program may be loaded, which contains all the above mentioned facilities. The programmer may use individual routines from the utility program and merge them with his own. Furthermore he may add additional subroutines to be called by non-assigned keys and customise the program to suit his requirements. All this can be done in Basic and should not prove too difficult. A complete listing is provided for this purpose.

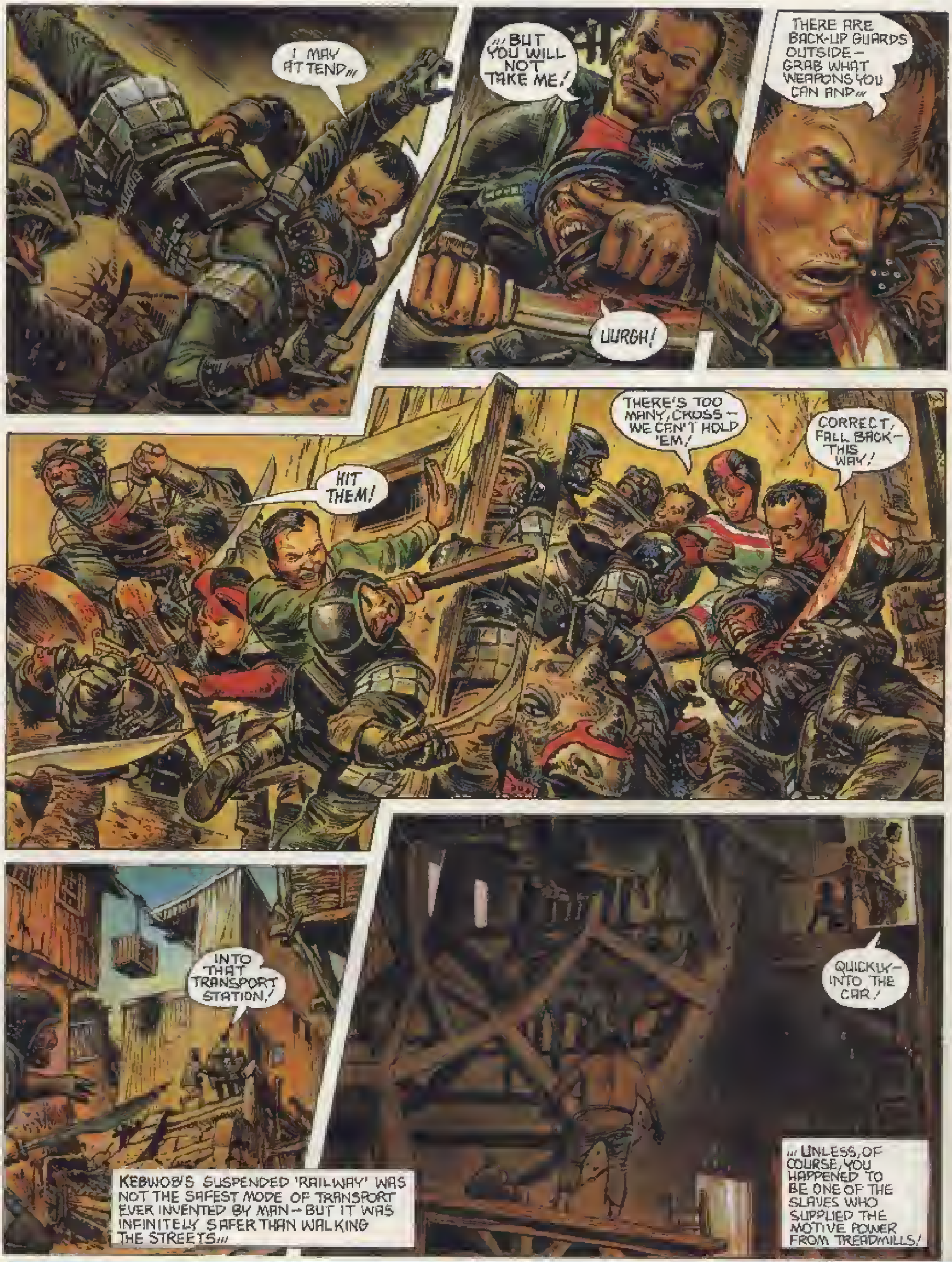
CONCLUSION

The RD DIGITAL TRACER runs rings round the usual drawing utilities with and without light pens. The tracing arm is definitely more easy and accurate to use than a light pen. However its application lies not in sketching and freehand drawing, but is limited to the copying or tracing of existing drawings. The extra features of SCALE, RETRACE and GRAPHICS increases the efficiency of the system and makes it the most versatile tracing utensil on the market. The only drawback is the price of £55.50 which makes it a rather expensive Spectrum add-on, and limits its application to the serious or well off Spectrum owner.

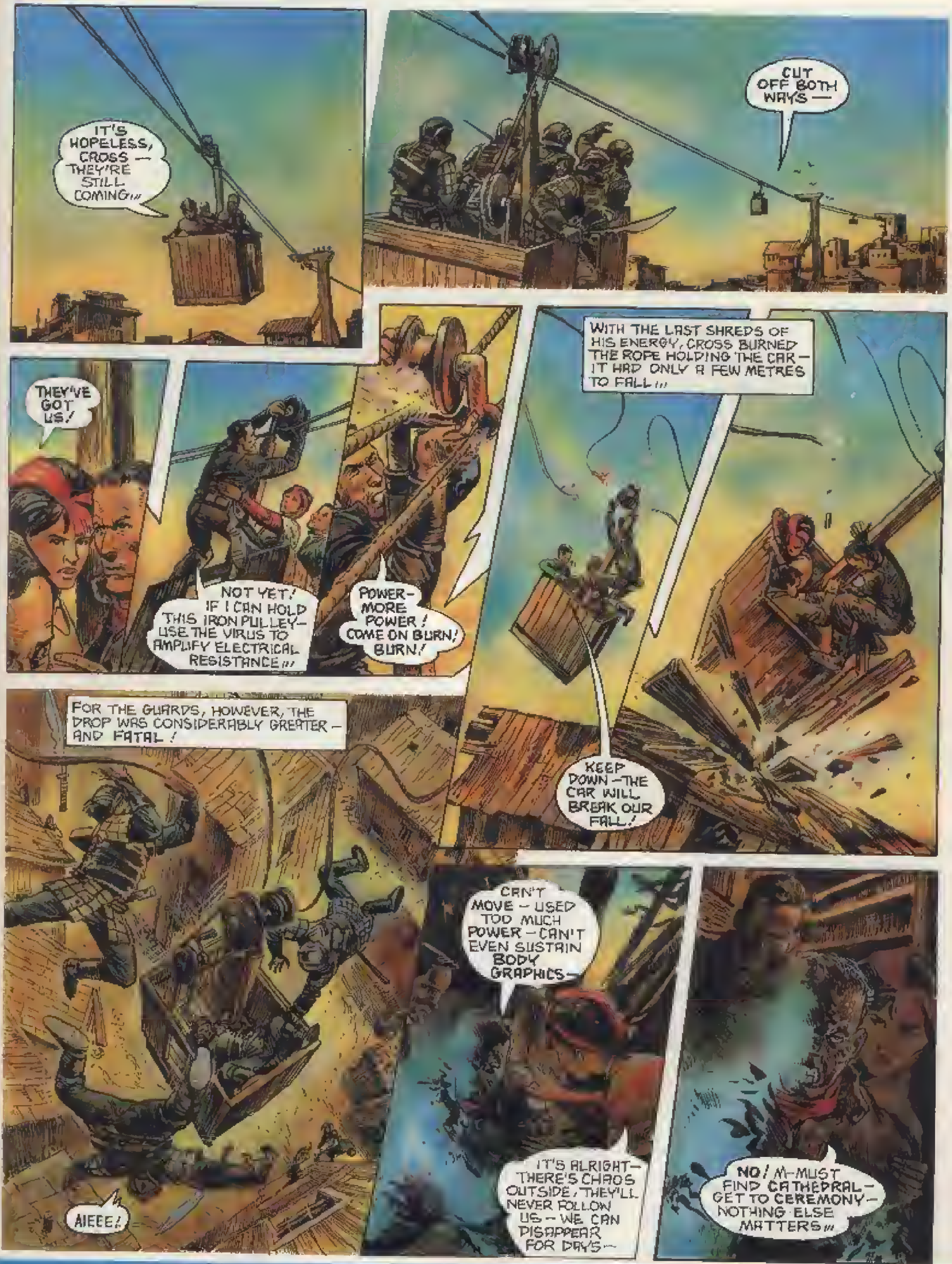
UPDATE:
The passengers of the **Star Liner Arcadia** were marooned and captive on an uncharted world. The man called **Cross** was dedicated to saving them. Actually, he was only part man; a mixture of human, computer and virus smashed into existence in Arcadia's crash, he was a bizarre hybrid. But he was still free and fighting. **He was their only hope...**

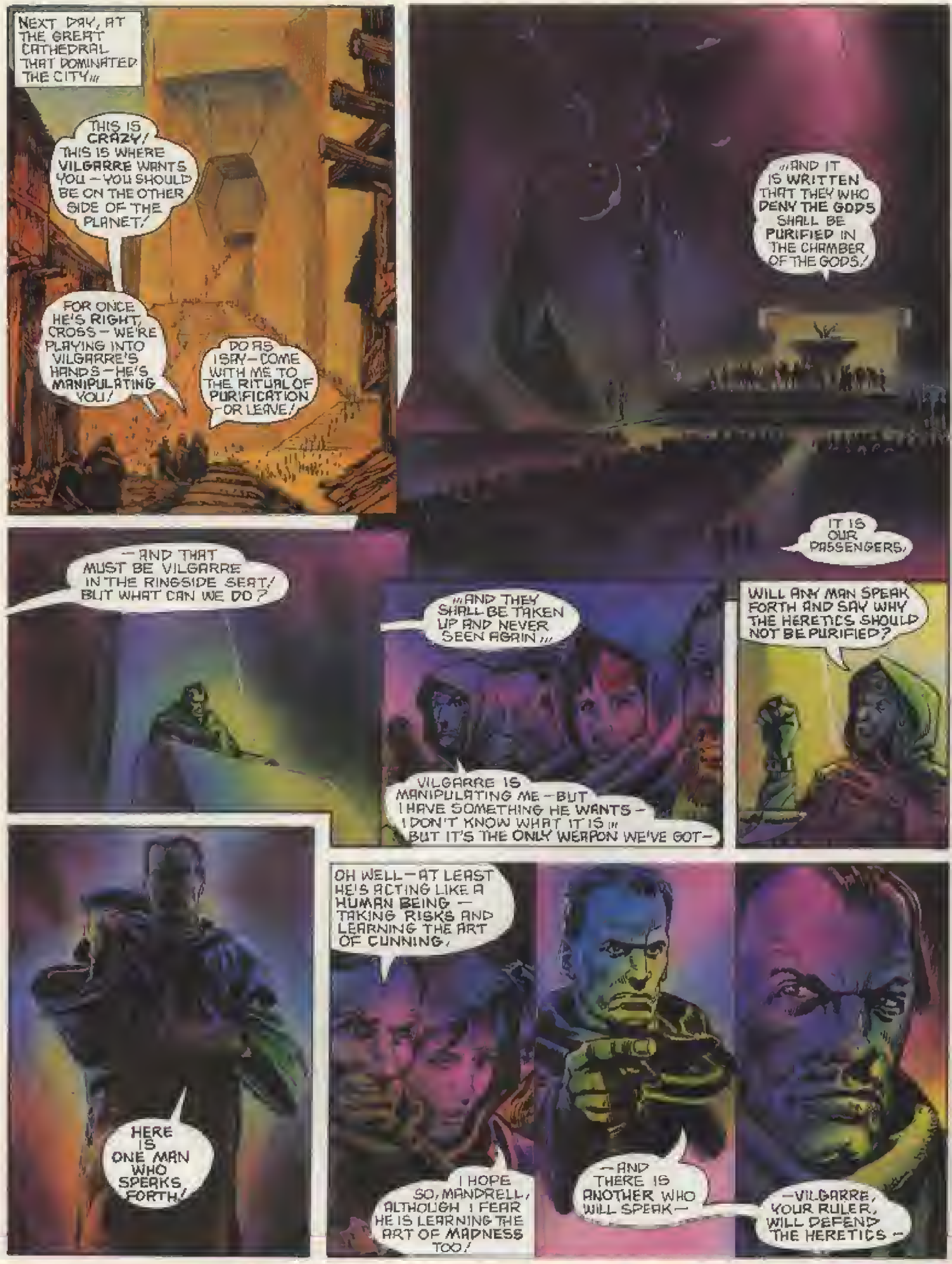
THE TERMINAL MAN


CROSS, WITH JIN KIMAS AND MANDRELL, WAS SEARCHING FOR HIS PASSENGERS IN THE CITY OF KEBWOB...
...WHERE FEAR AND VIOLENCE RAN THROUGH THE STREETS LIKE AN OPEN SEWER–
–THE DARKEST RATS RUNNING IN THAT SEWER WERE THE IMPERIAL GUARD– FEARED AND HATED BY EVERY LIVING THING...
CROSS AND HIS COMPANIONS HAD TAKEN REFUGE IN THE POOREST QUARTER...
ER, I THINK OUR PRESENCE MAY BE KNOWN TO THE BAD GUYS...
WHY...?
THAT'S WHY!
DAMN! PISTOL'S LOST CHARGE...
YOUR MAGIC TOY HAS NO POWER AGAINST THE IMPERIAL GUARD, OUTSIDER — LAY IT ASIDE AND PREPARE FOR DEATH!
ONLY YOU, THE TALL ONE, ARE TO BE SPARED — VILGARRE HAS A USE FOR YOU! YOU WILL ATTEND THE PURIFICATION OF THE OTHER OUTSIDERS AT THE CATHEDRAL...


I MAY ATTEND...
...BUT YOU WILL NOT TAKE ME!
UURGH!
THERE ARE BACK-UP GUARDS OUTSIDE — GRAB WHAT WEAPONS YOU CAN AND...
HIT THEM!
THERE'S TOO MANY, CROSS — WE CAN'T HOLD 'EM!
CORRECT, FALL BACK — THIS WAY!
INTO THAT TRANSPORT STATION!
KEBWOB'S SUSPENDED 'RAILWAY' WAS NOT THE SAFEST MODE OF TRANSPORT EVER INVENTED BY MAN — BUT IT WAS INFINITELY SAFER THAN WALKING THE STREETS...
QUICKLY — INTO THE CAR!
...UNLESS, OF COURSE, YOU HAPPENED TO BE ONE OF THE SLAVES WHO SUPPLIED THE MOTIVE POWER FROM TREADMILLS!

STORY BY KELVIN GOSNELL© DRAWN BY OLIVER FREY©


IT'S HOPELESS, CROSS — THEY'RE STILL COMING...
CUT OFF BOTH WAYS —
THEY'VE GOT US!
NOT YET! IF I CAN HOLD THIS IRON PULLEY — USE THE VIRUS TO AMPLIFY ELECTRICAL RESISTANCE...
POWER — MORE POWER! COME ON BURN! BURN!
WITH THE LAST SHREDS OF HIS ENERGY, CROSS BURNED THE ROPE HOLDING THE CAR — IT HAD ONLY A FEW METRES TO FALL...
FOR THE GUARDS, HOWEVER, THE DROP WAS CONSIDERABLY GREATER — AND FATAL!
KEEP DOWN — THE CAR WILL BREAK OUR FALL!
AIEEE!
CAN'T MOVE — USED TOO MUCH POWER — CAN'T EVEN SUSTAIN BODY GRAPHICS —
IT'S ALRIGHT — THERE'S CHAOS OUTSIDE, THEY'LL NEVER FOLLOW US — WE CAN DISAPPEAR FOR DAYS —
NO! M-MUST FIND CATHEDRAL — GET TO CEREMONY — NOTHING ELSE MATTERS...


NEXT DAY, AT THE GREAT CATHEDRAL THAT DOMINATED THE CITY...
THIS IS CRAZY! THIS IS WHERE VILGARRE WANTS YOU — YOU SHOULD BE ON THE OTHER SIDE OF THE PLANET!
FOR ONCE HE'S RIGHT, CROSS — WE'RE PLAYING INTO VILGARRE'S HANDS — HE'S MANIPULATING YOU!
DO AS I SAY — COME WITH ME TO THE RITUAL OF PURIFICATION — OR LEAVE!
...AND IT IS WRITTEN THAT THEY WHO DENY THE GODS SHALL BE PURIFIED IN THE CHAMBER OF THE GODS!
IT IS OUR PASSENGERS.
— AND THAT MUST BE VILGARRE IN THE RINGSIDE SEAT! BUT WHAT CAN WE DO?
...AND THEY SHALL BE TAKEN UP AND NEVER SEEN AGAIN...
VILGARRE IS MANIPULATING ME — BUT I HAVE SOMETHING HE WANTS — I DON'T KNOW WHAT IT IS... BUT IT'S THE ONLY WEAPON WE'VE GOT—
WILL ANY MAN SPEAK FORTH AND SAY WHY THE HERETICS SHOULD NOT BE PURIFIED?
HERE IS ONE MAN WHO SPEAKS FORTH!
OH WELL — AT LEAST HE'S ACTING LIKE A HUMAN BEING — TAKING RISKS AND LEARNING THE ART OF CUNNING.
I HOPE SO, MANDRELL, ALTHOUGH I FEAR HE IS LEARNING THE ART OF MADNESS TOO!
— AND THERE IS ANOTHER WHO WILL SPEAK—
— VILGARRE, YOUR RULER, WILL DEFEND THE HERETICS —

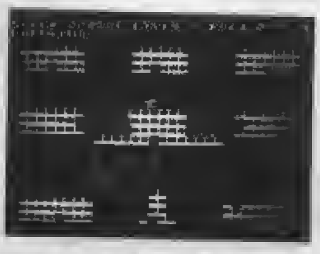
Next: The Thing that wouldn't die...

Les Flics

Producer: **P.S.S.**
Memory required: **48K**
Retail price: **£6.95**
Language: **machine code**

It was probably inevitable that at some time or other the Pink feline thingummybob with a tail and a penchant for stealing diamonds would appear in a computer game. *Les Flics* isn't someone's name of course but a bit of French slang for the police, and in fine Peter Sellers style French, the inlay explains the situation. This is an arcade game with adventurish overtones, or rather it's several arcade games in one.

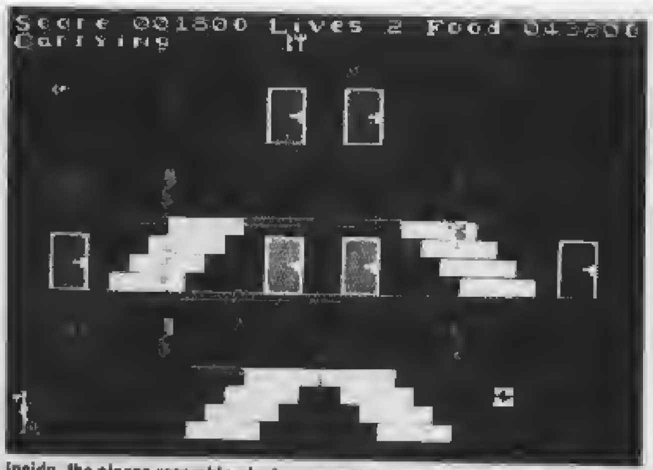
The first screen shows a plan of a city centre with a maze of tree-lined roads connecting nine buildings, their doors indicated in red. You appear as the Pink Thing with a tail on a road low down the screen. As soon as you start to move, two police cars appear on the streets, zipping about, but generally homing in on you.



Small graphics belie a lot of larger activity inside the buildings, while outside Les Flics patrol.

The idea is to enter the buildings and pick up useful objects, which will enable you to find and steal the blue diamond. The interiors of all the buildings are designed as platform games with five levels and holes in the floors. Levels are connected by staircases, up or down lifts and firemen's poles. The buildings are littered with all sorts of things including daggers, a bag, a spanner, knives and forks, a key, money bags, beard disguise, masks and of course the famous diamond. There are some other odd things like heavy weights and poles. These can be moved around and weights, if dropped through a hole, will fall and squash the chasers on the floor below.

There are food 'pods' dotted around and passing over them when in possession of the knife and fork will replenish your rapidly depleted energy levels. Numerous doors in buildings may be entered and exited from if in possession of the key. The chasers include Gend'armerie Kaolin (disguised as a chef), and of course Cleudeau – famous idiot detective.



Inside, the places resemble plush gyymnasiums – you're the pink thing with a tail.

The main task in this novel game is to collect things which will allow you to do the right things in other buildings, while remaining free of pursuit. Disguises help in some cases, the dagger will help in others. And all the while, the police cars are waiting outside . . .

CRITICISM

● 'At first, this game looked quite primitive with its block graphics, but once inside a building this all changes to good, detailed, colourful and well-animated characters. Finding the gemstone is fairly easy but getting it is difficult. With only a set number of buildings, I wonder how long its good playability and addictivity will last.'

● *'Unless the copy I was given had lost an extra set of instructions inside the larger plastic cassette case,* Les Flics *has a massive oversight. Nowhere does it tell you how to play the game or what the controls are. Of course, half the fun here is in finding out what does what and when it does it, but some control keys would have been nice. Trial and error proved them to be the cursors, rather a drawback in a game of this speed. Apart from this quibble,* Les Flics *is a great deal of fun, original, and combines several ideas in one game. The graphics are large and smoothly moving, amusing things happen, the lifts work very nicely, and there are enough adventure elements to make it all playable and addictive.'*

● 'It can get to be extremely frustrating when you have got a key, a bag, money, you're well fed and everything, and the diamond is around the next corner, to run into a police car through inept maze dodging! *Les Flics* got me real mad – so it must be a pretty good game. Initial impression of simple graphics quickly gives way to the smooth, fast and large ones of the building interiors. One of the nice touches is the incompetence of Inspector Cleudeau, who will often come along and knock a Flic unconscious for you, just before the cop was about to nick you. I thought this was fun and really addictive.'

COMMENTS

Control keys: cursors plus 0 to collect items and in combination with direction keys will operate lifts, poles, etc
Joystick: Kempston, Protek, AGF
Keyboard play: pity about the cursors, but responsive
Use of colour: good and varied
Graphics: very good
Sound: good, but the tune between lives gets irritating – an interupt key might have been useful
Skill levels: 1
Lives: 3
Screens: 11
Originality: very high in content and style
General rating: very good.

Use of computer	68%
Graphics	78%
Playability	56%
Getting started	56%
Addictive qualities	79%
Originality	85%
Value for money	78%
Overall	75%

Death Star

Producer: **Rabbit**
Memory required: **48K**
Retail price: **£5.99**
Language: **machine code**
Author: **J.H. Cain**

Death Star is a 3D shoot 'em up set in a trench on the surface of a massive alien craft, and as such is in the tradition of 'Star Wars' type games of which *Blade Alley* by PSS is another example. Unlike *Blade Alley*, this game has only the one screen. The scenario is that the evil Garth Fader has sent the most deadly weapons system in the Universe to destroy humankind and the only form of defence left is a squadron of three ion-drive Ford Prefects armed with laser canon. You are the only pilot left and by remote control you must save humanity, by flying along the trench firing at the enemy fighters as they hurtle towards you.

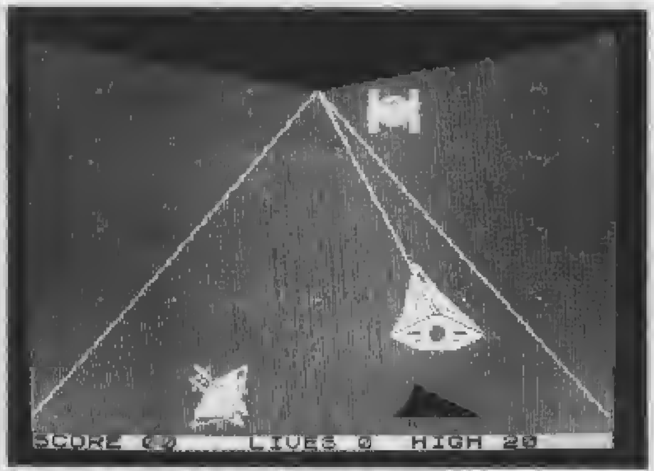
The trench is described on screen by three areas of the same blue, each divided by two pale blue lines going from the two lower corners almost to the top centre of the screen. This forms the 3D perspective view along the trench. Movement is indicated by a line of dots running down one wall, across the floor and up the other side. These appear in the 'distance' and shoot towards you, and continue to do so at intervals throughout the game. In the small slice of black sky at the top, stars are also moving towards you.

Your ship can move left and right as well as up and down, its position in space marked by its shadow on the trench floor. The aliens appear from the distance and are animated towards you through several stages. Some of them fire plasma bolts.

CRITICISM

● 'This is another of the 3D type shoot 'em ups, but it isn't really a very good game, it seems to lack excitement. The ship keeps getting hit even when you attempt to fly over other ships. Also it can be hit when flying high by attackers in the distance! It seemed to me that no matter where an attacker was (ie distance or height) it would hit you if it overlapped with your ship. This is surely a mistake in programming (or is it just poor program design?). The movements, etc, is okay but firing seems a bit on the "cheap" side with a streak or line going to the end of the trench (vanishing point). Not one of the best games of this type I have seen.'

● 'Death Star *doesn't have much going for it – rather disappointing after all those little ads in the magazines telling us life would never be the same again after* Death Star. *The graphics are simple to the point of not working – at least as far as the 3D goes, and there isn't anything special to do except shoot at enemy craft when they appear. The graphic of your ship is quite large and does distort in shape when you move from side to side, but oddly, remains the same shape no matter what height it is at. This makes it difficult to line up shots at times. The other irritating thing is that if this is supposed to be 3D, how come you can't get over a low flying enemy? Can't the programmer make his graphic characters merge or pass each other without the computer deciding you've been in collision when your eyes tell you that you haven't? All these points made the game unexciting and unplayeble as far as I was concerned.*'



Poor looking 3D supports very little in Death Star.

● 'I probably shouldn't compare one game with another as a form of criticising it, but after playing *Blade Alley*, *Death Star* has little appeal. Everything seems wrong with it. Any sense of dashing down into a deep trench at high speed is lost by those silly little dots which move fast when they are a 'long way off', and slow down as they get 'nearer' to you. That's wrong, it ought to be the other way about. Some of the alien characters are quite nice but overall I thought the graphics poor and undetailed – also very flockery. Is this compiled? The user-definable keys are good though!'

COMMENTS

Control keys: user-definable, four need plus fire
Joystick: AGF, Protek, Kempston plus most others via UDK
Keyboard play: average responsiveness
Colour: average and unvaried
Graphics: generally reasonable, though flickery but 3D effect poor
Sound: frying bacon sounds, poor explosion noise
Skill levels:
Lives: 3
Originality: a poor copy of a much more complicated arcade game
General rating: below average.

Use of computer	68%
Graphics	52%
Playability	48%
Getting started	68%
Addictive qualities	43%
Originality	54%
Value for money	46%
Overall	54%

Bewarehouse

Producer: **Positive Image**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code and BASIC**
Author: **Tom Cannavan**

Beware the haunted warehouse! Here you must get as many men as you can across the warehouse floor and up the ladder to safety .
The ghosts don't like their peace shattered so they will do several things to try and stop you, like throwing boxes and barrels, they may chase you or just try and block your path. Your energy is limited and it goes even faster when you jump about.

The screen depicts a cross-section through the warehouse. Your men line up below the floor and a short ladder takes them to the main floor. Above there are five areas divided by vertical walls that almost touch the floor, allowing the man to pass underneath but not jump. A rail runs along the length of the warehouse, and blue rails a little higher up. At the extreme left, a ladder runs up to the floor and safety – well almost! Rolling along the floor from left to right come the barrels. These may be jumped over by leaping up and hanging on the rail until the barrel has passed. In the last area, boxes are being thrown down which must be dodged. As the game progresses, there are more barrels at different speeds and boxes start appearing in the other areas too. Once on the ladder and up to the top, safety is assured – except on later levels when a ghost appears and walks across at the last second – it's to be avoided. Later still the ghosts may descend to the warehouse floor.

CRITICISM

● 'This game is totally original, one of the main features which attracts me to it. By about level 4 the game becomes almost impossible to play! Timing is important. The graphics tend to be a little bit on the primitive side, but overall they are colourful and well drawn. An addictive game from an unknown company.'

● '*Bewarehouse contains small and rather jerky but colourful graphics. The idea of jumping up and holding on is a good one, but I don't think its lasting appeal is very strong.*'

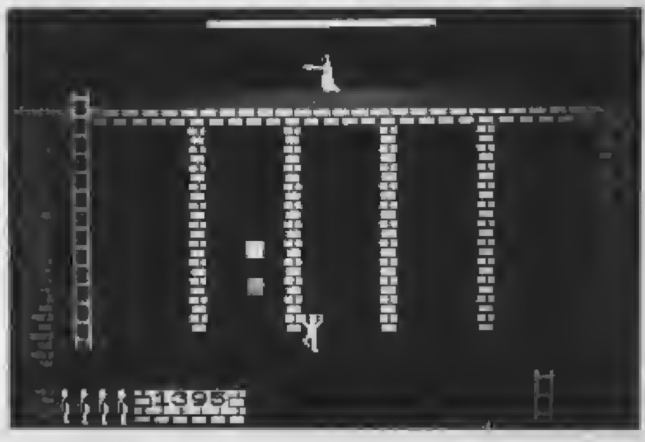
● 'I really enjoyed playing *Bewarehouse* because the use of the keys is good, and the skill requirements are well judged to make a fast and surprisingly difficult game. True, the graphics are nothing to write home about, but this is definitely one of those games where the idea is more important and the graphics do not detract from its playability. I do like the word BOP which appears for a quarter of a second after a box has hit you – at first you think your eyes are playing tricks. It's a simple game, and quite addictive because, although repetitive, it does offer a challenge in timing skill.'

COMMENTS

Control keys: Z/X left/right, 0 to jump
Joystick: none
Keyboard play: responsive
Use of colour: very good
Graphics: detailed, movement by block character
Sound: poor
Skill levels: progressive difficulty through 12 stages
Lives: 5
Originality: the idea behind *Bewarehouse* is really quite new, although a similar concept is used in Sinclair's *Stop The Express*
General rating: playable, medium addictive and simple, generally a good average game.

Use of computer	68%
Graphics	59%
Playability	65%
Getting started	72%
Addictive qualities	65%
Originality	69%
Value for money	61%
Overall	66%

A wary man in a scary Bewarehouse needs good leaps and strong arms.

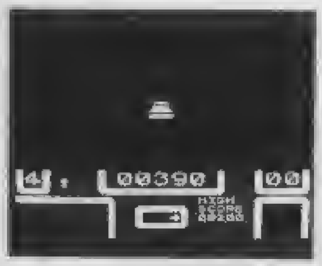


3D Bat Attack

Producer: **Cheetah Soft**
Memory required: **48K**
Retail price: **£6.95**
Language: **BASIC and machine code**
Author: **Mark Jones**

To emphasise its 3Deeness, *Bat Attack* has the '3D' at the end of loading, seen lying flat on the 'ground' some way off in full perspective. The characters then come closer as you 'walk' towards them, rearing upright when you get close.

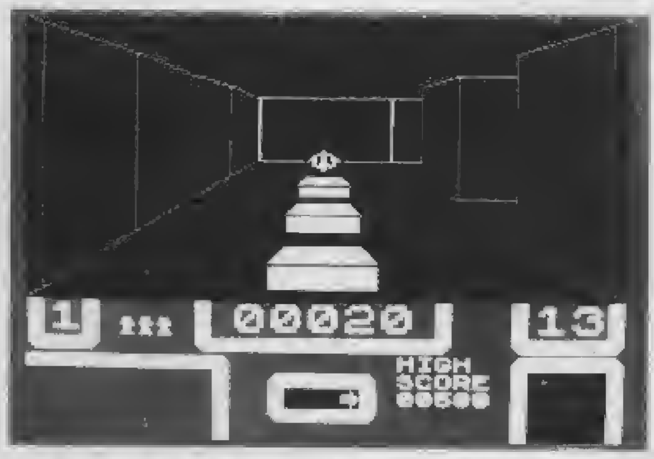
This is a three-dimensional game in which you are incarcerated in a tower with four floors. There is a lift between the floors and you can go to any one you wish, although each time you use the lift the bats which inhabit the floors of the tower will become more vicious.



The floors of the tower maze are lined with gold blocks which you must collect. You have no armament against the bat attacks, but at intervals on each floor there are cloves of garlic which may be eaten by running over them. This will give you immunity for 20 seconds only. If a bat attacks you after garlic has been eaten, it will stun but not kill the bat.

The corridors of the maze are drawn in perspective with green lines, uprights indicating the length of one step. The gold blocks on the floor are solid yellow rectangles, and the resulting scene resembles a modern open plan office with desks in straight lines and dividing partitions. Below the visual display there is a radar showing your position and that of the four bats. A map display of the maze, gold blocks and lift is also available at a key press. On this large map you can see the bats flitting about quite well. Below the display there is a direction indication arrow.

If you are hit by a blood sucking bat, a large crack appears over the screen and may take you by surprise if it came from behind. If it attacks from in front, you will see it approaching.



Gold blocks and garlic in Bat Attack. Remember – a clove a day keeps the bats at bay.

CRITICISM

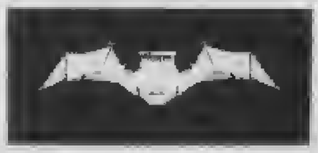
- 'Movement of the maze is fairly slow, while the bats fly very quickly. Garlic is never to be found when you need it, and a map that is not co-ordinated with your key movements – that is, you move in one direction and your position marked on the map moves in a totally different direction – very confusing, if not frustrating. Graphics are large, detailed and approach you in a quite realistic way. The colour is also well used. Overall, a batty unaddictive game.'

- *'After following the usual screen messages I pressed "any key to begin" (it wasn't the BREAK key) and the game crashed, leaving a mess on the screen. Said incident happened several times. I made a final attempt with the Kempston interface unplugged – and success! Surely if the game was tested fully such information could be included with the program. I thought* Bat Attack *was basically boring, dated and almost colourless 3D maze game. There were games like this about a year ago. Unless this type of game can be revitalised or improved upon, then the 3D maze game has had its day. Not a particularly inspiring or exciting version anyway.'*

- '*Bat Attack* instantly reminded me of Gilsoft's Maze of Gold. You had to collect gold bars in that one too, but without the hindrance of monsters chasing you. The graphics are greatly improved though over some of the earlier 3D maze games, and the map facility is excellently done. The sense of movement along the corridors works quite well, but I think the real drawback to the game's working really well is the bats. Wouldn't it have been better to provide a weapon for shooting them? The garlic is totally ungainable in a hurry unless you happen to be right on top of a clove of the stuff. What also confuses and slows reactions down is the system whereby you can move in any direction with the cursor keys, but to face in the direction you must use the cursors and CAPS SHIFT to turn. This means you can sail down a long corridor only seeing the side wall! In a panic situation this can be quite troublesome. I enjoyed *Bat Attack*, but I don't really think it offers quite enough playability or excitement in the long run to be addictive.'

COMMENTS

Control keys: cursors, CAPS and 0 to view maze
Joystick: ZX 2, Protek, AGF
Keyboard play: a little confusing at times, and no immediate response from the keys
Use of colour: fair to average
Graphics: average, reasonable 3D effects
Sound: poor
Skill levels: 11 with between 1 and 4 bats selectable
Lives: 3
Screens: 4
Originality: 3D maze games are hardly new – depends on how much one has to offer in new ideas . . .
General rating: Our reviewers' opinions ranged from poor, to fair/average to above average, but felt that at almost £7 it was pricey for what it offered.



Use of computer	54%
Graphics	55%
Playability	43%
Getting started	63%
Addictive qualities	45%
Originality	48%
Value for money	48%
Overall	51%

Space Command

Producer: **Virgin Games**
Memory required: **48K**
Retail price: **£5.95**
Language: **machine code**
Authors: **Terry Murray and Roy Poole**

Your task in this game is to protect a domed city on an asteroid from the ravages of alien attack. You control a small spacecraft armed with lasers, in this game written by the authors of *Yomp* and *Rider*.

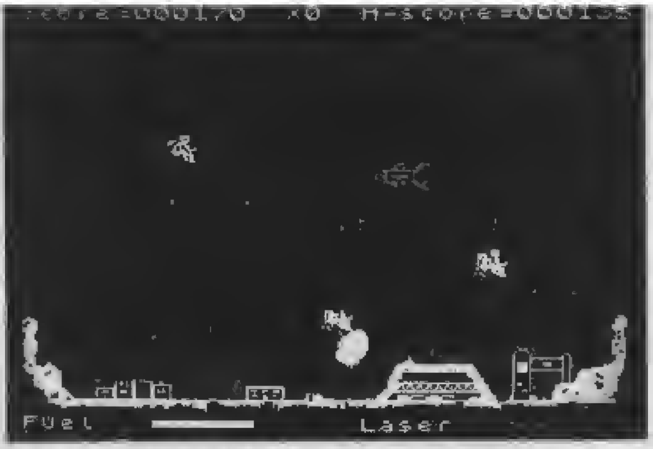
The city is protected by a two-stage force field whose energy banks become weaker after many impacts. This force field will be lowered to protect the civilian parts of the city, thus leaving the large communications dish unprotected. If the dish is destroyed, you lose a life. Your ship's lasers will run down with repeated use and take time to recharge; similarly fuel may run out before the attack wave of aliens.

The screen shows the surface of the asteroid at the bottom, with the force field emmanating between opposed wings of hillside. Between the hills can be seen the domed city, communications dish (in the centre) and the space port. Below the display are two bar codes for laser strength and fuel level.

An eight-option menu allows for joystick or keyboard selection, customisation to the extent of having armed or unarmed aliens and the type of space ship you would like. There is also a very good demo mode on offer. Aliens hitting the force field weaken it, so having unarmed aliens does not necessarily make the game any easier. The screen wraps around horizontally, and diving your ship into the force field will kill you off.

CRITICISM

- 'Quite a reasonable shoot 'em up here with good graphics. The game is fun but not really varied enough to make it



Wrap around rotters are virgin' on the suicidal as they try to wreck your Space Command.

truly addictive. Options to arm or unarm the aliens and have different spacecraft help. Quite good graphics, smoothish, fast movement of the ship and aliens. Virgin are improving. This is a good game but without much addictiveness.'

● *'This game plays so fast that it is almost impossible to concentrate on your targets. Graphics are large and detailed and the colour is well used. Other than shooting down aliens there isn't much else to this game. Overall, quite a good game but with low playability because of the impossible speed it plays at.'*

● 'I know I shouldn't compare games across computer types, but sometimes damn it, you have to. *Space Command* looks like the same sort of game as *Metroblitz* by PSS for the CBM 64. Now I know the 64 graphics are much stronger, but I have seen games for the Spectrum which I think are better than on the 64. In this case it isn't so, nor is the level of playability. After all, the screen area is the same, yet PSS manage to make it seem infinitely bigger. This spaceship has no momentum, zipping about like a gnat quite unrealistically. Also the game has been mis-paced, everything happening too fast for the size of graphics for you to be able to do much. The key positions are terrible, all in a straight line on the bottom row. It's a pity, because the game in itself is reasonable, just the general working seems to have gone adrift somewhere.'

COMMENTS

Control keys: Z/CAPS up/down, M/SYM left/right, SPACE to fire, ENTER = engine boost; alternatively, cursors and 0
Joystick: ZX 2, Kempston, AGF, Protek
Keyboard play: responsive
Use of colour: good
Graphics: reasonably smooth, large, detailed and fast
Sound: above average
Skill levels: 1
Lives: 4
Attack waves: 10
Originality: quite a novel space shoot 'em up
General rating: above average for those who like a very fast game.

Use of computer	61%
Graphics	75%
Playability	58%
Getting started	70%
Addictive qualities	44%
Originality	68%
Value for money	62%
Overall	**63%**

Carnival

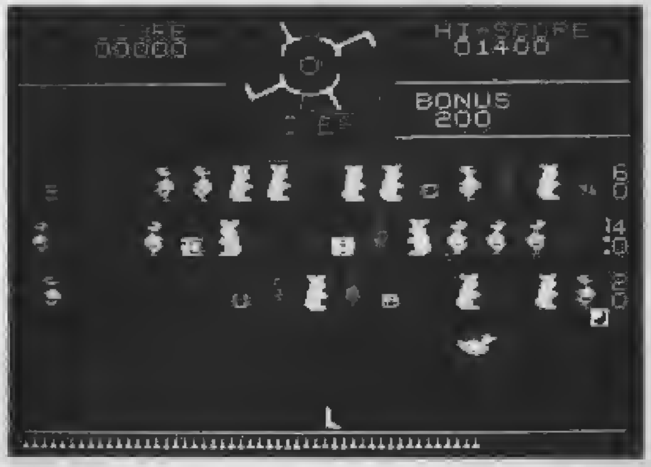
Producer: **Eclipse**
Memory required: **48K**
Retail price: **£5.95**
Language: machine code
Author: **W. Moore**

On looking at the cassette inlay, it's a bit difficult to decide who really is responsible for marketing this game. The copyright says *Eclipse*, but as the game is part competition this is run by **British Micro** of Watford, below which is says created and produced by **EMS (Holdings) Ltd.** EMS (Holdings) Ltd is, among other things, an advertising agency which handles a number of computer and software-related accounts.

Carnival is a fairground sideshow shoot 'em up. You start off with three lines of objects moving in opposing directions, bears, rabbits, ducks and a alphabet letters. At the base of the screen is your rifle, which may be moved left and right. Below that is an allocation of bullets. The yellow ducks have a tendency of breaking line, flying down and robbing you of some bullets. The letters should be shot in the correct order to spell the word **B-O-N-U-S** – oddly enough, this awards some bonus points to your score. Hitting targets on the upper row awards more points than hitting any on the lower row. Above the moving rows is a carousel of clay pipes which must also be shot for bonus scores. The game ends if you run out of bullets before clearing the screen. Bullets may be replenished by shooting two little blocks with a 5 and a 10 in them, bullets warded according to the number.

CRITICISM

● '*Carnival* is an excellent shoot 'em up game. Its graphics and sound are very good. Quite a bit of thinking out is required to clear a sheet with the limited bullet supply. There are quite a few features including shooting at a well-animated bear between games, the idea being to keep him on screen by hitting him centrally, which makes him change direction, so hit him again, etc. I found this a very playable game which seemed to have an appeal that kept me playing.'



'Roll up! Roll up! Shoot the flying ducks and harmless bunnies and win yourself a Graphpad.'

● *'I wasn't very sure at first that you would be able to take something like a carnival rifle range from reality and reproduce it on a computer game, but in fact it's worked quite well here. Graphics move smoothly and quickly and are well drawn. Care must be taken with your aim because of the short supply of bullets; this does add a considerable difficulty to the game. Ducks that tend to dive down and eat your bullets, generally come at once, so one of them is likely to get through your barrage of fire. This game is fairly original, playable and addictive at first, but I think its lasting appeal is likely to wane after three or four hours of play.'*

COMMENTS

Control keys: CAPS/Z left/right and SPACE to fire
Joystick: ZX 2, Kempston, Fuller
Keyboard play: responsive
Use of colour: good
Graphics: above average to good
Sound: good with on off option to kill the carnival sound
Skill levels: 6 speeds
Lives: 1
Originality: novel idea for a shoot up, well implemented
General rating: considering the competition prizes and game value, pretty good.

Use of computer	77%
Graphics	73%
Playability	78%
Getting started	76%
Addictive qualities	75%
Originality	70%
Value for money	76%
Overall	75%

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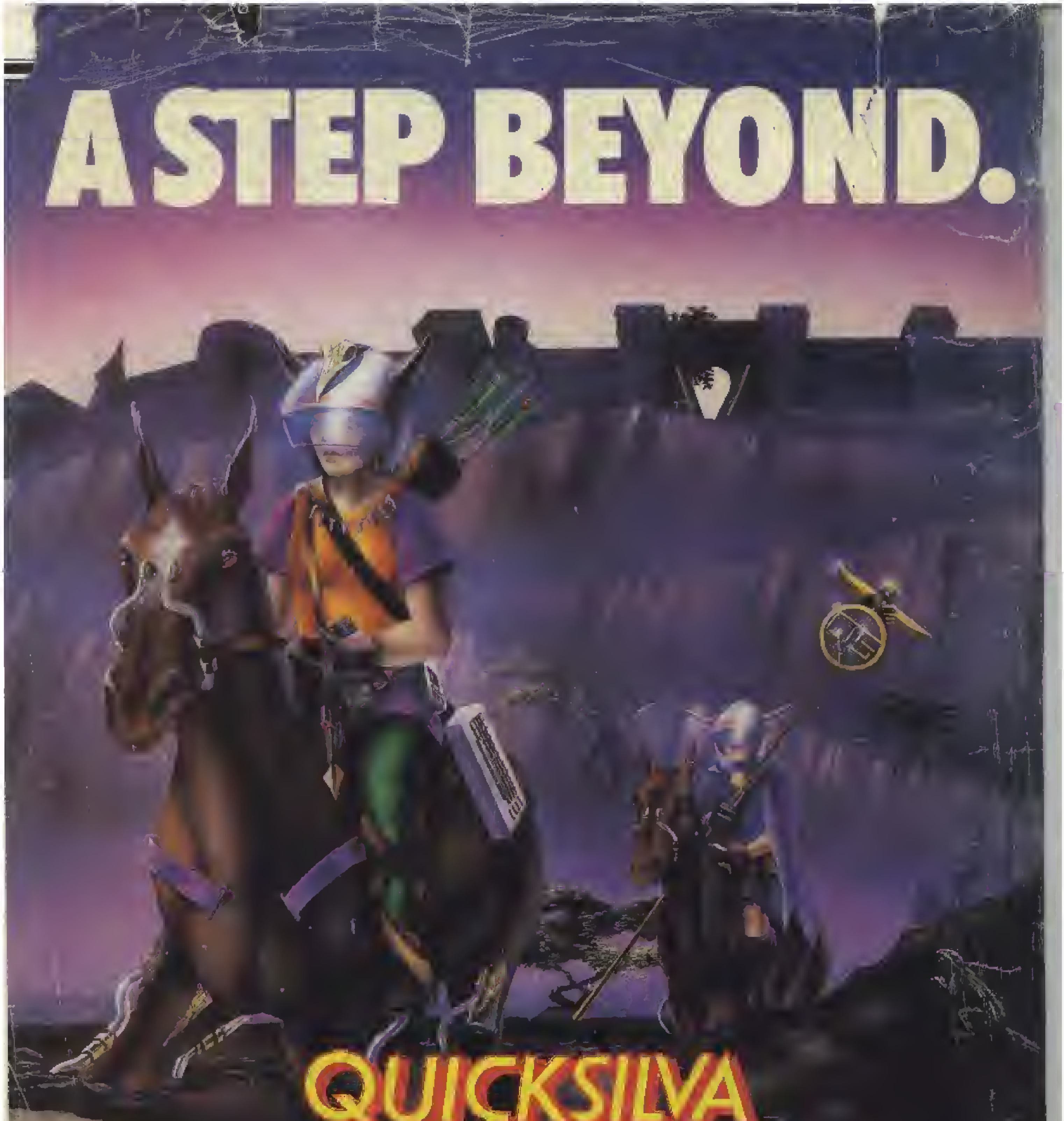

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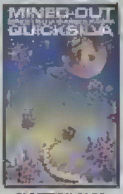

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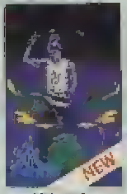

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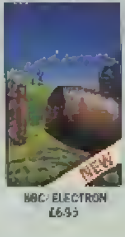

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